THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

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For the Farmers' Cabinet.

Prospects in Eastern Virginia for new Settlers.

To THE EDITOR,—I observe in the last number of the Cabinet, the highly interesting communication of "Viator," followed by the Report of the Petersburg Agricultural Society, on the subject of "the probable emigration into lower Virginia of a number of farmers from New Jersey."

In the autumn of last year, the writer of this, at the request of a few of his neighbours who intended to visit the Northern part of Virginia to look at the country, addressed a letter to the editor of the *Richmond Whig*, enquiring the prices of land in the Eastern counties, and what sort of reception emigrants from the more Northern States would be likely to meet with:—this letter was obligingly published in the *Whig*, and answers have been received from many of the most intelligent citizens, of more than twenty different counties. These letters, without exception, express the strongest desire to encourage Northern farmers to come among them, and hold out every inducement which can be desired. A friend of the writer introduced the subject to the Agricultural Society of Petersburg, which numbers among its members some of the most patriotic and intelligent citizens of the State.

In a very recent visit to that section of the State, the writer received all the attention and kindness for which Virginians are so justly celebrated. The country around Petersburg possesses advantages which certainly are not exaggerated in the Report—lands of excellent quality can be purchased within three to five miles of the city, at $5 per acre, in many instances with good buildings, and an abundance of timber. Shell marl of the best quality abounds almost everywhere, and manures from the city are almost altogether neglected. It was stated that the best stable manure sells for twelve and a half cents per cart load, or twenty-five cents for a two-horse wagon load. The markets for meats and vegetables, are higher than those of Philadelphia or New York. Wherever the attempt has been made, the result shows the soil to be susceptible of the highest improvement, and productive in all the grains, grasses and fruits.

In company with two of the members of the Society who drew up the Report referred to, we made an excursion to *Sandy Point*, the princely estate of R. B. Bolling, in

Charles City county.* We met a most cordial reception from the distinguished proprietor and his family, and enjoyed their splendid and generous hospitality for a couple of days. This estate consists of about eight thousand acres, nearly one half of which is in cultivation. About eight hundred and fifty acres were in wheat, which promised a yield of twenty to thirty bushels per acre—adjoining this, a field of 525 acres was in corn, in which thirty ploughs were at work—more than one thousand acres were in clover of luxuriant growth, most of which is to be ploughed down for the next crop of wheat; in addition to these five lots of twenty-five acres each, near the Mansion-house, are in high condition and present a miniature of the large farm. The cultivated land fronts on the James' river for several miles, while back of it lies the timber—nearly four thousand acres of primitive growth and exceedingly valuable. The mansion is delightfully situated on the bank of the river, and commands a view of it for many miles in both directions; the lawns and garden are adorned with shrubs and trees, and cultivated in a style that rivals the most tasteful in the vicinity of the Northern cities. At a short distance above the house is a large and handsome brick barn, with thrashing machine, fans, corn-shellers, mill for grinding corn, saw-mill, &c., &c., all worked by a neat steam engine. The houses for the labourers, stables for the stock, the stock itself of horses, mules, oxen, cows, sheep, and the roads through the estate, all evince the taste and care of the proprietor, and deserve the highest praise. If any one doubts the capabilities of the soil in this region of the State, a visit to Sandy Point, and the estates on the opposite side of the river—Lower and Upper Brandon—will convince the most sceptical. Yet in passing down the river the next day in a steamboat, we met a highly respectable citizen of Chester county, Pa., who told us he had just purchased eleven hundred acres within a few miles of the latter named places, on fine navigable water, well timbered, with abundance of the best marl, having on it a grist-mill in good preservation, and water power sufficient for a saw-mill, in addition; for which he pays but $2 per acre. The writer of this has received direct offers of near one hundred thousand acres, in very desirable localities, at prices varying with the state of the improvements, from $1 to $30 per acre. S. S. G.

Moorestown, N. J.

* See a notice of this estate on pages 19 and 79, vol. 7, of the Farmers' Cabinet.

American Produce in England.

As the demand for articles of our manufacture or growth is extended, it will, we trust, be found that our ability to satisfy the demand, is also increased. With a great variety of climate, and vast extent of territory—with our industry and skill and free institutions, who shall limit, under Providence, the amount to which we are able to feed and to clothe the world? The following extract is from a letter in the *Boston Traveller*, dated London, April 3rd, 1846.—Ed.

Within two or three years a great many articles of food, the produce of the U. States, have been sent to England in large quantities, and they have commanded good prices. American cheese, when it was first introduced here, was not esteemed, and only the poorer classes would purchase it, the quality was so ordinary; but now the leading cheese mongers always have a large supply of American cheese, and take care to inform the public of its superior quality. *Indian corn* is another article of food that is just now talked about, and great efforts are making to introduce the bread made from wheat flour and Indian meal, not only amongst the Irish people, but in the United Kingdom. It is coming rapidly into favour in all the large towns. Dr. Thompson recently read an able paper at a meeting of the Glasgow Philosophical Society, on the nutritive qualities of Indian corn, which he ranked very high, and said it made "an agreeable article of diet."

The luxuries, too, of the U. States, have made their appearance in the metropolis of England. To say nothing of the great value of American ice, and its extensive use by the nobility and gentry, the tables of the West End aristocracy can now be supplied with canvass-back ducks, wild turkeys and venison! The "*American Ice Company*" recently astonished the epicures of the clubs by the following announcements: "*American Forest Venison.* A few saddles, of very superior quality, in fine condition, just received by the American Ice Company, 106 New Bond street." Again: "*Wild Turkeys*, from the American forest, domesticated turkeys, wild geese from the American lakes, mongrel geese, and a superior lot of capons, just received in fine order, at 106 New Bond street." Here is another announcement, and it is probably the first of the kind that ever appeared in a foreign newspaper: "*Canvass back ducks*, from Chesapeake bay. A very fine lot of this celebrated water-fowl, just received from America, in excellent preservation, for sale by the American Ice Company, 106 New Bond street."

The American ice trade must prove exceedingly profitable the present season, as the remarkably mild winter here prevented

any of the traders in ice from securing any stock. During the spring and summer months American ice will be in great demand. It is sold at ten shillings sterling the cwt., or at two pence per pound at retail. A warehouse has been prepared at the St. Katharine's dock, in a cool place, and effectually protected from the sun and heat, expressly for the storage of American ice, and where it can be immediately deposited on being cleared from the vessel, and remain till the owners remove it to their own warehouses. The Londoners are just beginning to appreciate American ice, and large quantities can readily be sold here at high prices.

For the Farmers' Cabinet.

Delaware Lands.

To the Editor,—As immigration to Texas, Oregon, or California, is the order of the day, I desire to show that it would be the interest of good practical farmers, to purchase lands in Newcastle county, Delaware, at $15 to $30 per acre, or in the Southern part of Cecil county, Md., at $10 to $20 per acre. Any practical farmer with a small capital, can purchase a farm of good natural soil, well wooded, at, say $20 per acre. Say he purchases 300 acres at $20; this will be $6,000, at an interest annually of $360. Allow 250 acres to be tillable land, divided into five fields,—50 acres to be woodland—one field to be planted in corn, one to be sowed with oats, after corn, and one sowed with wheat on a clover sod; and one field to mow, and one for pasture. Any prudent, industrious working man, can lime and clover this land, and he will receive in two years, or in two crops, on all the fields, as much grain and grass, over and above all which the land would have produced without lime or clover, as will pay for the lime and cost of hauling, spreading and interest. So that any judicious man may find it his interest to purchase these worn-out lands, and he will realize more clear profit than he would if he immigrated to the far West or South.

In this county the water is good, and the citizens are healthy, and large fortunes have been made and are being made, by poor men, who had but little money and but little credit. But by perseverance, they have in many instances purchased farm after farm; made them good; built fine houses and good barns on them, and are worth ten, twenty, forty, sixty, and one hundred thousand dollars. What has been done can be done again; like causes will produce like effects: "The way to wealth is as plain as the road to the corn-field." Land in Newcastle county and in Cecil county, Md., bought ten years ago at $10 and $20 per acre, is now worth $40 to $60, and the owner not out of pocket one cent for improvements, beyond the clear income from his improved lands. The crops will double in two years, from the use of forty bushels of lime per acre; in five years they will increase so as to sell for three times the original cost. I know of no part of the United States that offers equal advantages to the poor, industrious, judicious, go-ahead man, whose motto should be "be sure you are right, then go ahead."

The Schuylkill lime is generally used in this region; but lime from Baltimore, and from New York and Delaware, have all been used with uniform success. Shell lime is also equally good on our soil. Plaster should be used on clover, at the rate of one bushel per acre, annually. The clover should be ploughed in for wheat on the poor lands. Wheat should be sowed in all cases by the first week in September.

If some of the farmers of Pennsylvania, New Jersey, New York, or New England, would come and purchase the worn-out lands, and aid us by their talents, industry, and capital, we would have the finest improved counties in the middle States, and it would be much more to their interest than roving over the United States and other countries, for a resting place, and after they get it, are far worse off than those who have come among us; witness the success of Philip Reybold, William J. Hurlock, William Polk, Andrew Eliason, Eldad Lore, James T. Bird, John Jones, Col. Joshua Clayton, John Biggs, George Harbert, John R. Price, John Mc Cracken, John P. Cochrane, and many others, who have made their farms good and acquired handsome profits by small investments; their lands are worth two hundred to four hundred per cent. more than the original cost.

Henry Cazier.

Mount Vernon Farm, Del., June 2nd, 1846.

Lard for London.—Happening in at Hastings' Lard-oil Factory, we found them putting up lard in hogs' bladders, for an English dealer. This is the fashionable form of the article of the best quality, in that market, where it brings fifteen cents a pound. The cases come from Ohio, are well cleaned, and when filled and cold, appear as white and as hard as an ostrich's egg.—*Springfield Republican.*

The delicate pink spots on turkeys' eggs will wash off when the egg is fresh and warm.

Rearing Cattle, with a view to early maturity, as practiced in Berwickshire, England.

By John Wilson, Edington Mains, Berwickshire.

The valley of the Tweed has long been famed for the rearing and fattening of cattle, its rich pastures, warm turnip-soils, and proximity to England, affording peculiar facilities for prosecuting this branch of rural economy. The "Short-horns" were early introduced into it, and soon became its established breed; and though still inferior to the Tyneside herds in symmetry, colour, and grazing quality, yet nowhere, perhaps, are they brought to market, at two years old, in such perfection of weight and fatness.

The production of beef, at the quickest and cheapest rate, being the object in view, the first requisite is a stock of cows possessing qualities suitable for this purpose. Accordingly, they should be good milkers—able to keep at the rate of two and a half to three calves each—of a kind known to have a tendency to fatten readily, and to come early to maturity, and of a structure likely to produce a vigorous, well-grown steer. In other words, they must be good Short-horns; only having more regard to their milking properties than is usually done by breeders of bulls. And here it may be well to notice, that it is in general highly inexpedient for the beef-grower; the farmer who depends largely on his regular cast of fat cattle—to attempt breeding his own bull. *It is only a few individuals in any district who have the taste and skill requisite for this difficult department of the business, not to mention the large capital which must necessarily be invested in it, the precariousness of the return, the greater liability to casualties of such high-bred animals, and the additional expense of their housing and maintenance.* On Tweed-side, the breeding of bulls is confined to a very limited number of persons, chiefly Northumbrians, who, by devoting their whole attention to this department, are able, from year to year, to furnish a class of bulls which are steadily improving the general breed of the district. The contrary practice is at this moment compromising the character of this valuable breed of cattle in several districts of Scotland, into which they have been more recently introduced. *Made wiser on this point by experience, the farmer of the Border purchases from some breeder of established reputation a good yearling bull, which he uses for two or three seasons, and then replaces by another in like manner.* This bull serves his own cows and those of his hinds, and some of the neighbouring villagers', and thus, though his own stud be limited to six or eight cows, he can select from the progeny of his own bull as many calves as he requires to make up his lot, and has them more uniform in colour and quality than could otherwise be the case. As the male parent among sheep and cattle is known to exert by far the greatest influence in giving character to the progeny, and increasingly so in proportion to the purity of his breeding, it is evidently much for the advantage of the beef-grower to *spare no reasonable trouble and expense in obtaining a bull of thorough purity, and then to select his calves with the most scrupulous attention.* From overlooking all this, how often may cattle be seen, on the best of land, too, which can only be fattened at an enormous expense of food and time, and after all, are so coarse in quality as to realize an inferior price per stone. Occasionally a few beasts of the right sort will be seen in such lots, which, by going ahead of their fellows, to the extent of £4 or £5 a piece, of actual market value, show what might have been done by greater skill or attention on the part of the owner.

It is very desirable to have all the cows to calve between the 1st of February and the 1st of April. If earlier, they will get almost dry ere the grass comes, and calves later than this will scarcely be fit for sale with the rest of the lot. When a calf is dropped, it is immediately removed from its dam, rubbed dry with a coarse cloth or wisp of straw—this being what the cow would do for it with her tongue, if allowed—and then placed in a crib in the calf-house among dry straw, when it receives a portion of its *own mother's* first milk, which, being of a purgative quality, is just what is needed by the young animal. For a fortnight, new milk is the only food suitable for it, and of this it should receive a liberal allowance thrice a day; but means should now be used to train it to eat linseed-cake and sliced Swedish turnip; and the readiest way of doing so is, to put a bit of cake into its mouth immediately after getting its milk, as it will then suck greedily at anything it can get hold of. By repeating this a few times, and placing a few pieces in its trough, it will usually take to this food freely, and whenever this is the case, it should have as much as it can eat, that its allowance of milk may be diminished, to meet the necessities of the younger calves which are coming in succession. This is of the greater importance that it is always most desirable to avoid mixing anything with their milk by way of helping the quantity. When a substitute must be resorted to, oatmeal por-

ridge mixed with the new milk, is perhaps the best. Sago of late years has been much used for this purpose; but an eminent English veterinary surgeon has recently expressed a very decided opinion, that its use impairs the digestive powers of the animal and predisposes to disease. The sour smell invariably found in a calf-house, where porridge or jelly of any kind is mixed with the milk, is proof sufficient that indigestion is the consequence. An egg put into each calf's allowance, and mixed with the milk by stirring with the hand, is a good help, and never does harm; but with this exception, it is best to give the milk warm and unadulterated, however small the quantity, and along with this, *dry* farinaceous food, turnips and hay, *ad libitum*. If more liquid is needed, a pail with water may be put within their reach, as this does not produce the bad effects of mixed milk. Indeed, in this it is the best to keep as closely as possible to the natural arrangement according to which the calf takes its suck—at first frequently, and then at longer intervals, as it becomes able to eat of the same food as its dam.

The diet of the cows at this season is a matter of some consequence. Swedish turnips yield the richest milk, but it is too scanty, and calves fed on it are liable to inflammatory attacks. Globe turnips should, therefore, form their principal food during the spring months. Care must also be taken that they do not get too low in condition in the autumn and winter, and for this end it is well to put them dry *at least* three months before calving. Some may think this long; but on a breeding farm, milk is of little value at this season. The cows, when dry, are kept at less expense, and by this period of rest, their constitution is invigorated, greater justice done to the fœtus, now rapidly advancing to maturity, and so much more milk obtained after calving, when it is really valuable.

When the calves are from four to six weeks old, they are removed from their separate cribs to a house where several can be accommodated together, and have room to frisk about. So soon as the feeding-yards are cleared of the fat cattle, the calves are put into the most sheltered one, where they have still more room, and are gradually prepared for being turned to grass; and when this is done, they are still brought in at night for some time. At six weeks old, the mid-day allowance of milk is discontinued, and at about fourteen weeks they are weaned altogether. When this is done, their allowance of linseed-cake is increased; and as they have been trained to its use, they readily eat enough to improve in condition at this crisis, instead of having their growth checked, and acquiring the large belly and unthrifty appearance which used to be considered an unavoidable consequence of weaning. The cake is continued until they have so evidently taken with the grass as to be able to dispense with it. They are not allowed to lie out very late in autumn, but as the nights begin to lengthen and get chilly, are brought in during the night, and receive a foddering of tares or clover foggage. When put on turnips, the daily allowance of cake, (say 1 lb. each) is resumed, and continued steadily through the winter and spring, until they are again turned to grass. This not merely promotes their growth and feeding, but—so far as the experience of five or six years can determine the point—seems a specific against black-leg, which was often so fatal as altogether to deter many farmers from breeding. It may be well to state here distinctly, the particular purpose for which cake is given at the different stages of their growth. At first the object is to accustom them to a wholesome and nutritious diet, which will supplement the milk obtained from any given number of cows, so as to admit of a greater number of calves being reared, and at the same time have greater justice done them than could otherwise be practicable. At weaning time, again, it is given to help the young animal over the transition from milk to grass alone, without check to growth or loss of condition. During the following winter, however, the special object of its use is to prevent black-leg, as, but for this, turnips *ad libitum* would be sufficient.

When put to grass as year-olds, they decidedly thrive better on sown grass of the first year than on old pasture, differing in this respect from cattle whose growth is matured. They are laid on turnips again as early in the autumn as these are ready; and it is a good practice to sow a few acres of globes to be ready for this express purpose. It does well to give the turnips upon the grass for ten or fourteen days before putting them finally into the feeding-yards; and then, if they can be kept dry and warm, and receive daily as many good turnips as they can possibly eat—globe till Christmas, and Swedish afterward,—they will grow at a rate which will afford their owner daily pleasure in watching their progress, and reach a weight by the 1st of May, which, if markets are favourable, will reward him well for all his pains.

The leading features of this system are, *uniform good keeping* and *progressive improvement;* in other words, to get them fat

as soon after birth as possible, and keep them so till they reach maturity. The details given above are descriptive of the expedients generally adopted by the breeders of this district for securing these objects.—*Jour. of High. & Ag. Soc. of Scotland.*

Communicated for the Farmers' Cabinet.

Cape May Agricultural Society.

A meeting of the citizens of Cape May, N. J., was held at the Court-house on the 25th of Third mo. last, and organized the "Cape May County Agricultural Society." A Constitution was adopted, and Samuel Springer was elected President; Downs Edmunds, Jr., Joshua Swain, Jr., Franklin Hand, and John Stites, Vice-presidents; Richard C. Holmes, Rec. Sec.; John H. F. Stites, Cor. Sec.; and Richard Thompson, Treasurer.

Moses Williamson delivered an appropriate and good Address, from which we make the following extracts.—Ed.

It may be thought by some, useless to form an Agricultural Society in this place; that the mode of farming has been established long since, and any variation from the old habits and practices, is out of the question. They used to plough two or three inches deep when they broke up their fields, foddered their cattle in the main road, kept forty half starved cattle, instead of twenty that might have been wintered tolerably, would sell their grain, and lose two or three cows and half a dozen yearlings, for want of food and attention; buy land enough for three farms, and have nothing left to lay out in improvements, till fifty acres of land, and get from three to five hundred bushels of corn, while a better crop could be got from ten acres of good land properly cultivated. We are glad, however, to say that there have been great improvements made within a few years past in this respect. But where improvements have been made, they have not, by any means, been pushed to their utmost limit. Another objection to such a society, and which is of a piece with the preceding, is that many suppose they can be taught nothing new on the subject—that it is lost time and waste of money to gain information, or to make experiments on farming. Another objection to doing anything in improving our lands is, our soil is light, barren, and near the sea-shore, and there is nothing within our reach that will make any improvement on them and pay expenses. In answer to this I would say, that the improvements already made are sufficient to show, that much may be done to raise the land to quite a high state of cultivation, and that, too, by the ordinary means which might have been enjoyed by the farmer from time immemorial—his barn-yard, ashes, oyster-shells, king-crabs, and sea-weed. These have been used in various instances with ample success. If our soil is light, it is capable of great improvement. We know that on the same piece of ground that will yield twenty bushels of corn per acre, forty bushels may be produced, and a much better article. It is by manuring and properly cultivating the land, this excess is secured. Since discoveries have been made in the preparation of manures, by composting, every facility is afforded for furnishing any quantity of excellent manures. The statements which have been given to the public, and which may be relied on, show that these manures may be procured at a very reasonable expense. It is now generally acknowledged, that science is likely to lend important aid in this branch of the agricultural art,—that chemical experiments will make vast improvements, by bringing to the light what had been concealed from the farmer for ages. He may now go scientifically to work, bring to bear on his land the peculiar elements which will call out the latent energies of the soil, or supply the deficiency, as the case may be, and thus be able to prepare a manure suited to any soil he may possess. Seeing, too, every year new discoveries are made, so beneficial to the farmer, there is everything to hope, and nothing to discourage him in the diligent pursuit of his business. I am persuaded that we have only made a beginning in furnishing means to enrich our lands, in kind or in quantity, that may yet be found in the ingredients which our own county may supply, and which, by the proper application of chemical agents, will prepare these ingredients to do for our poor lands more than we could ask,-nay, make it almost as productive as the prairies of the West, and on account of its locality, far more valuable.

The practice of sending to Philadelphia to purchase some good, bad, or indifferent animal for a good serviceable horse, does not exactly suit on a farm—however well it may suit a horse-jockey—and with a little care and expense they might be brought up on our own soil, where their qualities would be known; and then such as were most suitable for this region of country could be raised, and such as combined strength and fleetness, fit either for the light carriage or working team. Whatever may be said in favour of the ox-team, it moves too slow for the industrious, driving farmer. But before much can be calculated on in this line, we must raise fresh grass in greater abundance than at present.

The same is true in regard to cattle. We

will never do anything worth while in the milk business until our calves are brought up on fresh grass, instead of *three-square*, and cows be wintered on fresh hay and roots. Although there are many excellent varieties of cattle, yet how little pains is taken to secure the best. It would cost no more to keep a cow that gave a large quantity of milk, than one that gave but little, and which, too, would make better beef. It has been truly said, by an eminent agriculturist, "How many stunted milch cows do we see which may be said to go dry all the year round. How many steers, which, after emptying a whole corn-crib, at last in the spring look like the corn-crib itself, all ribs without, and all hollow inside."

As to swine, we would only say, that there seems but little attention paid to them, beyond provision for family use, being something over 2,000 only raised in the whole county in the year 1840. There is quite a market for hams in the county, which might be supplied at home instead of abroad.

In regard to *sheep*, little attention is paid to these—any kind will answer—any care sufficient, and if they can be found in shearing time, with a few lambs, to make up for the loss of old ones, all is right. And yet how many more might be raised, better in quality and yield, in respect to wool and flesh, if proper attention were paid to them.

I would make a remark respecting the implements of husbandry. These also are improving every year, rendering the business of farming to be better done at a cheaper rate. There is already to be found every utensil that can be serviceable to the present degree of farming knowledge. But how often is some important thing neglected, because some proper implement is not at hand; and how often is a thing badly done for the same reason. Many a useful experiment would be made by the farmer, were he only provided with the proper instruments to do it. One would try deep ploughing if he had a subsoil plough; another would put in his crop in the best manner, if he had a good plough, instead of so rooting it up that you can scarcely tell which way the furrows run, or whether it had not been the regular work of a herd of swine.

I have hinted before that farming too much land is a common fault in our county,—and it is so almost everywhere. We proportion the manure to the size of the field. It is thinly scattered over twenty acres, when it should be put on ten. It then disappears with the first crop, and must be manured again when another planting is made. Being thus exhausted, there is no chance for grass seed to take root, if grass is thought of; for there are many who have extensive farms, and who have farmed for thirty or forty years, yet never dream of laying out a penny to get their fields into grass. But without sowing grass seed on our fields no permanent improvement can be made. If this were properly attended to, there would be little doubt as to the final success of agriculture in our county. When we can see the green clover and timothy and orchard grass succeeding our wheat, rye, and oat crop, instead of a crop of sickly weeds and wild grass, or the bare sand itself, then we may expect a new era in farming to be at hand in this part of the country.

It is said we have no market that is convenient enough to encourage the business to any extent. We would say, that there are many articles which are brought from abroad which might as well be furnished at home; and when we have supplied our own market, will it be impossible to find the way to Philadelphia or New York markets? The improvements in roads and steam navigation will most likely keep pace with the improvement in agriculture. The day cannot be far distant, when it will be a common business to transfer the produce of Cape May to Philadelphia; and when it will be no more a matter of surprise to see a Cape May man at market, than to see a man there who has come twelve miles in his own wagon.

I would now refer to some things which might do much towards the advancement of the agricultural interests among us. The first thing that suggests itself to my mind is, that legislation should do something in this matter more than it has done; that some more inducements should be held out to the farmer by way of premium or protection. That such an important art should have so little done in its behalf by so many of the State legislatures, seems surprising. We would expect the annual bleeding which it gives the farmer, by way of taxation, which he submits to most patiently and honourably, pays for the privilege of keeping horses, cows and wagons, and for his land that he keeps them on, when neither land nor horses nor cattle have blood enough to keep circulation going. We have our school fund, and acts are passed relating to the manufacturing interests, but the farmer may go on and do the best he can, without any special encouragement from that government of which he is the staunch supporter. Thousands of dollars have been expended on public schools, so called. I am not unfavourable to learning, and having it as thorough and universal as possible. But why not encourage a business so important to the community as agriculture? But what receives so little coun-

tenance from legislation by way of encouragement!* How many resort to some mechanical business, or other mode of living, because husbandry is attended with so few inducements to pursue it; and how many, almost useless in the world, might be induced to settle in the country and improve the soil; and how many families, entirely destitute, would by this means find enough to live on and to spare!

There is one thing that will always make some people shy of farming, and that is, it is a little too hard work, and it is almost too honest a way of getting a living for others, and for some few it is not high enough business. And on the other hand, the moral tendency, should the business become more general than it is, will counterbalance the evils that might be apprehended. The effects of industry upon the human mind are incalculable. Where can the youth, up till fourteen years of age, the usual period when they go to an apprenticeship, be so profitably employed, so healthful to his body, so advantageous to his morals, as on a farm? Let us have good farms, good grain of all kinds, good horses, cattle, sheep and swine, and the more of them the better. What may, in some measure, compensate for the neglect of legislation in this matter, are the liberal premiums which Agricultural Societies usually offer for improvements in the various branches of agriculture, with a view to excite to honourable distinction. Although the reward be more meritorious than profitable, such competition would lead to the most favourable results; and such has been the effect where this practice has been adopted. And why would not legislative encouragement lead to the same important result? Had legislation offered a donation to every County Agricultural Society in the State years ago, we should not now be meeting for the first time, nor you hearing the first Address on the subject in this county. We should have been some few steps in advance of where we are now in the business of farming. The annual exhibitions of the improvements made, would have given an impulse that would by this time have doubled our present productions.

Another thing indispensable to success is, that farmers must secure all the information on the subject of agriculture within reach. There is an intelligence which should be characteristic of the farmer. The various books written, and the numerous journals published monthly and weekly, will afford much important aid. As well might a man undertake to be a politician, without informing himself of the various movements going on in the political world, as for a farmer to neglect what is the opinion and practice of other men in regard to the department of agriculture. Meetings, also, may be held, in which matters interesting to the farmer may be discussed—committees appointed on the various branches of husbandry, who shall report their investigations. By this means the best and earliest information would be secured; and this much, a Society, carried out in all its operations, would accomplish. A man would then understand why he does so and so, and be able to give a good and philosophical reason, instead of saying that his father did, or did not so. He will find the use of science in his profession as much as in any other.

He who makes himself master of his own profession, is not the man to neglect other branches of learning; nay, this extensive research in his particular calling carries him often within the sphere of other arts and sciences. So that, instead of merely understanding what pertains or is considered to pertain to his art, he is furnished with a large fund of general knowledge. It is a new thing to introduce into the system of school instruction, the subject of agriculture. But why should it not be deemed as important to give instruction on this branch of business, as it is to give lectures on medicine to the young man preparing for the duties of a physician? The business of the farmer includes not only the skill and labour in managing the implements of husbandry, so as to secure the greatest amount of produce; he is not to be regarded as a mere drudge, and contributing his quota in the same manner as his horse, in bringing forward the productions of the earth. But he can improve his mind in knowledge—exercise his judgment—display his taste in the various branches of his agricultural operations. He is entitled to the comforts and conveniences of life as much as any other man; and he has a good opportunity of manifesting his taste in regard to his dwelling, barn, sheds, fields, &c. His dwelling, in its plain, simple appearance, indicating convenience rather than show, amply surrounded with trees selected from the forest and the nursery, a protection alike from the storm and the hot rays of a summer sun, will bespeak a word of commendation from the passer by, and be indicative of the peace and comfort enjoyed within. His barns and sheds are constructed with a view to convenience and comfort, his fields are properly arranged and securely enclosed.

But that the farmer may himself enjoy the

* No State Geologist has explored the county of Cape May.

better the fruits which the soil is capable of yielding, the kitchen-garden comes in for a good share of attention, and he feels his independence as much as at any other time, when the good housewife has spread upon his table the choicest vegetables, in every variety, which have been furnished from his own garden. I need not speak of the profit of a good garden, especially to a farmer, either for his own consumption or for the market. But his garden should be one—not a thing with that name, without sufficient enclosure to protect it against depredators of every description, and without a soil fertile enough to produce the best vegetables in great abundance.

The farmer has much to encourage him in his laudable business, so necessary to human existence and rational enjoyment,—one which man in his innocence followed,—one the most healthful which a man can pursue. A business, too, we might venture to say, as fruitful in suggesting to the mind of man the power, the wisdom, and the goodness of the Creator, as any other. He sees the wonderful skill of the Deity in adapting the soil to the production of plants. He sees every day the goodness of his Heavenly Father, in furnishing for man and beast their necessary food. Such manifestations of design cannot be lost upon the observing farmer. He lives amid the works of the Almighty, and the laws of nature which he established when he made the heavens and the earth. Then he marked out the laws which regulate the raising of plants; the seed time and harvest as then, so are they now.

These extracts contain many *home* and substantial truths, and we trust they will not be lost on our friends of Cape May, or indeed we might add, on our friends generally. Very frequently it happens that a remark may not exactly apply to ourselves, yet if we make the most of it, a hint, a suggestion may be derived from it of great practical usefulness.—Ed.

Improvements in Irish Agriculture.

By Henry S. Randall.

A great improvement is taking place in the agriculture of some districts in the north of Ireland, by a system of means novel, and not without interest to American farmers. The incentive or impulse to these changes is given by the proprietors to the tillers of the soil, partially by a judicious distribution of bounties, calculated—and this is most wisely done—as much to appeal to the pride—the *esprit du corps*—as to the pocket of the recipient: and the spirit thus awakened is furthered and sustained as well as guided in proper channels, by the employment of agriculturists of science and experience to counsel and encourage the tenants, to see that each is properly noticed and rewarded for his improvements,—in short, to exercise all the supervision which the tenants will *voluntarily* submit to. This is far preferable to *coercion* through leasehold stipulations.

Foremost among the landlords who thus wisely study their own and their tenants' interests, is the Earl of Gosford, whose large estates lie in the county of Armagh. And how favourably does this nobleman's conduct, in this particular, contrast with that of the scores of titled *absentees*, who treat the land that bore them as a conquered province, to be drained of its entire income to support the dissipations of the English and continental capitals and watering places!

Among the scientific agriculturists, who, as the employees of the landholders, have done most to improve the husbandry of the north of Ireland, first, probably, stands William Blaker, Esq., the "agriculturist" of the Gosford and some other estates. This gentleman, without claiming to have been the originator of each detail of the system of husbandry advocated by him, probably deserves the credit of uniting the several parts—practices drawn from various local systems—into one homogeneous whole, adapted to the exigencies of the section of country which his labours are designed to benefit. And here let it be remarked, in passing, that the skill of the *adapter* is scarcely second to that of the discoverer or inventor. The same system, it is but a truism to say, will not work equally well under all circumstances. Skilfully to seize upon and connect, from the great store-house of mind, or of physics, the precise materials adapted to *our own wants*, is the wisdom of the wise man—the talent of the able one.

An occasional correspondence with Mr. Blaker for several years, has kept me in some measure advised of the results of his labours. These are shown in the proceedings of the annual Market Hill agricultural meeting. But before proceeding to discuss the relative merits of the *new* and *old* husbandry, let us glance at the organization of this Agricultural Association, and some of its methods of doing business. Hints, not without value to *us*, may, peradventure, be gleaned from them.

I presume from all that has met my eye, that there is no initiation fee to the association—its limits being entirely territorial ones—the Earl of Gosford and another landholder, a brother of Mr. Blaker's, paying all the premiums. These are mainly of a character which makes the bounty to a great

extent an honorary one, such as splendid clocks, silver cups, &c. It would be the easiest thing in the world to *cant* a little on this subject by saying that *money* would be more useful to the tenant. The greatest *permanent* benefit the tenants derive from the system of rewards, would be to make them good farmers. This would not only relieve the presents wants, but, with the ordinary blessings of Providence, would guard against the future. If a showy testimonial of his victory, like an elegant clock, or a piece of plate, will influence him more than money to such a result, then it is unquestionably better to offer him the former. That the devisers of the scheme understood well whom they had to deal with, the result shows. I certainly have never read of keener contests for agricultural superiority than those of the tenants forming this association, nor, I will add, those that interested me more. And there is another feature in this system which *appears* to work well, and which would be incompatible with money premiums. It is this. The ownership of these clocks, etc., is not secured by one victory. *Three* are necessary to that end. The design of this, and it seems to produce that effect, is to lead to *sustained* exertions. Premiums, as commonly paid, often go to reward a more desultory effort, or "good luck." It is amusing to learn in the reports of the committees at the Market Hill meeting, and in the published remarks of Mr. Blaker, the strong exertions of the victors of last year to maintain their superiority this. After the last whirlwind charge of the French at Waterloo—an empire staked on the "issue of a die," and *lost*—Bonaparte left not the disastrous field a more thoroughly *defeated* man, in his own estimation, than some of the losers of these clocks and cups! One brave fellow had done his utmost—but a trivial error in a nice point had robbed him of victory. I can fancy his look of pride humbled, of disappointment acutely felt but manfully borne! This was too much! Lord Gosford, immediately declared he should retain his clock—and to the victor he awarded a still more expensive one! Before dismissing this part of the subject, it may be well enough to remark, however, that *all* the bounties or premiums are not paid in this way. Seeds, guano, etc., for the use of the land, are from time to time distributed to reward improvements.*

I have hitherto omitted to state the particular objects for which these premiums are paid. They are paid invariably, I believe, for the best managed farm, including all their crops, their proper rotation, their adaptation to the greatest amount or maximum of production, without unnecessary or improper exhaustion of the soil,—stocks of all kinds,—management of manures,—permanent improvements, such as draining, fences, buildings, &c.—in a word, the greatest improvement to the farm and the greatest profit to the tenant. This is no doubt better both for landlord and tenant, in the circumstances in which these parties are placed towards each other, in Ireland, than to pay bounties on separate animals and crops.

The size of the farms of the great body of the Irish tenants, would strike an American farmer with surprise. Perhaps the average would not exceed ten English acres. But do these men, if they have families, get a comfortable living on these mere "patches" of land? If we may trust the assertions of Mr. Blaker, they do,—although the land is in many cases of a very inferior quality, until improved by the tenant.

The following table will give an idea of what the land supports:

Stock on ten farms, containing 98 *acres,* 3 *roods,* 20 *perches, on Lord Gosford's estate.*

No.	Contents of Farm.			No. of persons on each Farm.	Stock on Farms					Rent of Farm.		
	A.	*R.*	*P.*		Horses.	Cows.	Heifers.	Sheep.	Pigs.	*£.*	*s.*	*d.*
1	9	0	33	7		4			2	11	1	8
2	8	2	20	7		2	1		2	10	7	0
3	8	3	9	7		3			2	11	9	1
4	9	1	32	6		3			2	11	18	10
5	8	2	10	5		4			2	17	3	0
6	9	2	0	4	1	4	1	2	2	11	5	9
7	10	2	14	4	1	3			2	11	18	6
8	10	3	17	6	1	2			2	12	7	2
9	10	3	30	8		3			4	12	0	6
10	12	1	15	6	1	4			6	12	0	8
Total,	98	3	20	60	4	32	2	2	26	121	12	2

* Large quantities of the seeds of such crops as it is considered important to introduce and extend, are also *lent out* to the tenants. On the Gosford and Drumbanagher estates, says Mr. Blaker, 42 bushels of turnip seed, 9 tons of clover seed, 138 bushels of vetches, and 512 bushels of grass seed, were thus lent to the smaller tenants during the past season.

One-half of the above land is under flax or grain crops.

Would a single farmer with his family, in our own country, make a living off the whole 98 acres, after paying a rent of £121 12*s* 2*d*—$583 90? Unquestionably not, under anything like ordinary circumstances. Neither could an equal amount of stock be kept on anything like the same amount of even our best lands. It will be observed that one-half of the 98 acres is under crops, very little of which reaches the stock, besides the straw. Should we let the keep of the horses, heifers, sheep, pigs, and two of the cows offset against the straw, then we should have 30 cows kept on 49 acres of land,—a cow to an acre and a fraction less than two-thirds of an acre!

Whence this difference in the acreable products of the United States and Ireland? Is it in the quality of the soil? The better class of New York lands are decidedly superior to the 98 acres above particularized, if we may credit Mr. Blaker,—that is, before the latter were recently made over, so to speak, by the present system of culture. How then *sixty* human beings can obtain subsistence, where in this country a single family could not—over and above rent—is indeed surprising. True, things which the American farmer would consider *necessaries*—things of course—would be unapproachable luxuries to the small Irish tenant, even under the ameliorating influences of a Gosford and a Blaker.* An American farmer can eat of meat, wheaten bread, milk and butter, and as many varieties of vegetables as he chooses, three times a day, and have a "chicken in his pot" not only "on Sunday," but on any other day in the week! More than this. He can send his children to school five or six months in the year, until they are 16 or 17 years old, and can, and often does, educate them to the learned professions. Great as the difference is, however, between the expenditures—the "outgoes"—of the American and Irish farmer, it by no means explains the monstrous discrepancy between a given amount of land supporting sixty persons or only six. Nor do the highest market prices at which products are sold in Ireland, explain it. Saying nothing about the *people*, the amount of *stock* kept on the land shows conclusively, as I have before stated, that such farmers as those whose farms and stock are enumerated in the foregoing table, actually obtain a much larger product per acre, than the proprietors of the best American lands. The question again arises, whence is it? This is best answered by considering the system of husbandry under which they obtain these results, the *new* system, as it is called, introduced by Mr. Blaker.

Mr. B. found these small farms imperfectly drained, notwithstanding they were cut up into various small plats or fields by numerous ditches. Mr. B. introduced furrow-draining, and urged the levelling of all the surface ditches. This resulted in a considerable saving of the land,—and the whole farm, with the exception of the enclosure about the barns, &c., is thrown into one field. The crops are then put in in "strips" across the entire farm. This of course is followed by the practice of soiling the whole stock. Mr. B. contends that two cows can be thus summered from the same land one would require if pastured. He also recommends a larger proportion of roots and other crops to be fed green, than we know anything about in this country. This is necessary where the soiling system is pursued, and it leads to an indefinite increase of manures. These manures, increased by composts, and protected from the weather, are sufficient in many instances to give a dressing to one-third of the whole farm!

Such is a bare outline of the system. How much of it would be applicable here, the good sense of each one must determine. That it has wrought a great and ameliorating change in a portion of Ireland, under the auspices of Lord Gosford and Mr. Blaker, there can be no doubt. It is rapidly extending in that country. Agriculturists—some of them tenants—tutored under the eye of Mr. Blaker, are constantly going out to take charge of other estates, thus spreading the system far and wide. Success to them! Success to the pioneers in this philanthropic work! Across the wide Atlantic, we tender them the meed of American sympathy, and American praise.—*Journal of Agriculture and Science.*

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* Justice all round requires that I should copy the following statement of Mr. Blaker, in relation to the holders of the ten farms given in the table. He says: "the stock that these small farmers are possessed of shows that they are by no means in penury. I have chosen those who are living along the road side, and if any one has the curiosity to visit them to morrow, I shall have a jaunting car ready at Mr. Ringland's, at Gosford gate, to take them to their houses. No one, I expect, will conceive he is to meet with any great appearance of wealth—it is up-hill work to amass riches from a few acres of land, paying a fair rent, and rearing a young family—but I believe every one of them will be found in a thriving condition."

SALT, or brine, is good for the *Plum Tree*, *Asparagus*, and *Onions*.

A New Flower Garden in Paris.

A late letter from Paris, contributed to the columns of an exchange journal, has the following information:

"The fashionables of Paris have been thrown into an ecstasy delight by the opening of a flower garden on a new plan, in the *Champs Elysees.* It is called *Le Jardin D' Hiver*, the Winter Garden, and is a veritable floral palace. A perpetual summer reigns under its vast glass roof, with an atmosphere as fragrant as the spicy vales of the Indies. Here are found the treasures of all seasons and all climates; the most modest and most superb plants, flowers of the mountains, and flowers of the valley. Beautiful promenades are laid out, bordered with trees and fringed with evergreens. After threading the pretty labyrinths of the garden, you enter the saloon, carpeted with green and furnished with ottomans, where the flowers are arranged with such exquisite elegance and art, as only the hands of a Parisian can arrange these delicate creations. The court in front of the garden is always filled with the carriages of those rich votaries of pleasure, who come here to select from two hundred thousand plants, the most beautiful flowers with which to decorate their persons for the ball or the opera, and as a matter of course, drawing all the dandies and idle fashionables of the capital to this enchanting retreat, so that the proprietor is likely to reap a golden harvest from his happy thought of a Winter Flower Garden."—*Repository.*

Tabular Estimate of Crops for 1845.

We again have the pleasure of acknowleging the reception of a large volume of upwards of 1300 pages, from Edmund Burke, the Commissioner of Patents, containing his Annual Report to Congress, for the year 1845.

The Patent office is now regarded as the general head and representative of the useful arts and industrial interests of the country, and this volume necessarily embraces a great amount of information on these matters. The industry and enterprise and good judgment of the present Commissioner, as well as of his predecessor, have swept over a large field, and gathered within the compass of a Report, a vast number of facts and statements, both valuable and interesting.

Twelve hundred and forty six patents were applied for during the past year, about 200 more than for 1844. The receipts of the office were nearly $43,000, while its expenses were such as to leave a balance of more than $11,000 in its favor.

In the 9th No. of our last volume, tabular estimates were given of the crops of the different states, for the year 1844. Similar tables taken from the Report, are appended, showing the results of cultivation, &c. for 1845. While the population of our country is steadily on the increase, and the general prosperity is steadily augmented, we find apparent, a variation from year to year, in the amount of agricultural productions, though we must not forget to bear in mind that the numbers given, are all of them, but approximations to the truth. Thus the crop of corn is stated to have been in 1845, four millions of bushels less than in 1844, and nearly eighty millions less than in 1843. The crop of wheat however was by several millions of bushels, heavier than in either of those years, while that of hay was very considerably lighter. The production of silk, appears to be gradually on the increase. Tennessee, Ohio and Kentucky were last year the three greatest corn growers, while New York, Ohio and Pennsylvania grew the most wheat. Louisiana makes more than three times as much sugar, as all the rest of the states together, and New York and Vermont are the next heaviest producers of this article. South Carolina excels in her rice, while Georgia is only inferior to Mississippi in the making of cotton. New York is far the largest producer of potatoes and hay, but Kentucky greatly exceeds all in the growth of tobacco. Thus with our varied climate from Maine to Florida, and from this city to the rocky mountains. Providence has given us every facility for the growth and production of every necessary of life, and of every luxury that can at all minister to our comfort. We dwell truly in a south land. While the soil and climate of one district may direct the agriculturist to some particular objects, those of other districts, favor the cultivation of what is not less essential to the general convenience, though of a very different character. It is our privilege too, not to live beneath a sky so genial, as to supercede the necessity of labor; nature, here, though disposed to yield to cultivation every thing that can be desired, is nevertheless of so rugged a temperament, that she will only throw forth of her abundance to the strong arm of industry and toil. And what a blessing is this! Let us ever remember that no idle population can be prosperous and happy. Who shall limit our resources? or where is the political economist who will calculate the millions and millions which our population may reach, and say that it can go no further? As our country is almost without boundary, so is our ability to produce food for the consumption of man, without limit. And should happily our own follies not thrust away the measure of greatness and increase, which the heart is sometimes made to thrill with the prospect of, he who lives an hundred years hence, may see a Commonwealth, containing within itself, all the elements of a greatness and a strength, both moral and physical, a parallel with which, history has never yet been able to record. Every thing among us of a secular nature, seems aiming at *progress.* Every succeeding year multiplies facilities of every character, and agricultural improvements, we trust, will not be in the rear. If we would not impede this progress, but lay deeply and securely, a foundation for continued national prosperity, let each one practically illustrate the laws of morality—of right—in all the relations of life, as well social and political, as private.—Ed.

TABULAR ESTIMATE OF THE CROPS FOR 1845.

State or Territory.	Population in 1840.	Present estimated popu'n.	Wheat.	Barley.	Oats.	Rye.	Buckwheat.	Indian corn.
			Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Maine - - - -	501,973	575,500	502,000	273,000	1,564,000	185,000	69,000	1,912,000
New Hampshire - -	284,574	291,500	647,000	123,000	1,942,000	425,000	154,000	1,828,000
Massachusetts - -	737,699	817,000	241,000	162,000	1,856,000	594,000	126,000	3,098,000
Rhode Island - -	108,830	120,000	5,000	51,000	200,000	47,000	4,000	731,000
Connecticut - - -	309,978	320,000	114,000	26,000	1,646,000	1,010,000	444,000	2,649,000
Vermont - - -	291,948	298,000	854,000	51,000	3,593,000	321,000	300,000	1,728,000
New York - - -	2,428,921	2,626,000	16,200,000	3,574,000	23,700,000	3,560,000	3,347,000	13,250,000
New Jersey - - -	373,306	409,000	1,050,000	8,500	4,912,000	2,954,000	900,000	7,314,000
Pennsylvania - -	1,724,033	1,960,000	12,580,000	141,000	19,826,000	11,929,000	3,322,000	17,126,000
Delaware - - -	78,085	79,000	440,000	4,500	828,000	53,000	13,000	2,713,000
Maryland - - -	470,019	485,500	4,884,000	2,700	1,691,000	944,000	109,000	3,723,000
Virginia - - -	1,239,797	1,255,000	11,885,000	84,600	8,888,000	1,441,000	—	27,272,000
North Carolina - -	753,419	760,000	1,969,000	3,600	2,673,000	217,000	—	14,887,000
South Carolina - -	594,398	600,000	1,168,000	3,600	700,000	48,000	—	8,184,000
Georgia - - -	691,392	784,000	1,571,000	11,800	833,000	64,000	—	13,320,000
Alabama - - -	590,756	660,000	980,000	7,200	1,527,000	76,000	—	16,650,000
Mississippi - - -	375,651	586,000	378,000	1,800	1,189,000	21,000	—	2,167,000
Louisiana - - -	352,411	440,000	–	–	–	2,000	—	8,360,000
Tennessee - - -	829,210	910,000	8,340,000	5,500	8,625,000	384,000	26,000	70,265,000
Kentucky - - -	779,828	835,000	4,769,000	15,400	13,091,000	2,548,000	14,000	54,625,000
Ohio - - - -	1,519,467	1,760,000	13,572,000	219,600	24,447,000	798,000	950,000	57,600,000
Indiana - - -	685,866	860,000	7,044,000	35,200	13,902,000	221,000	73,000	30,625,000
Illinois - - -	476,183	722,000	4,563,000	101,200	12,957,000	143,000	99,000	25,584,000
Missouri - - -	383,102	540,000	1,525,000	11,000	5,466,000	81,000	19,000	15,625,000
Arkansas - - -	97,574	140,000	2,427,000	900	436,000	12,000	—	8,250,000
Michigan - - -	212,267	320,000	7,061,000	197,200	4,815,000	77,000	260,000	4,945,000
Florida - - -	54,477	80,000	–	–	8,000	--	—	733,000
Wisconsin Territory -	30,945	100,000	971,000	20,000	1,200,000	5,000	25,000	672,000
Iowa Territory - -	43,112	115,000	793,000	25,000	681,000	8,000	14,000	2,028,000
District of Columbia -	43,712	54,000	15,000	–	12,000	7,000	—	35,000
Texas - - -	–	100,000						
	7,069,453	19,602,500	106,548,000	5,160,600	163,208,000	27,175,000	10,268,000	417,899,000

TABULAR ESTIMATE OF THE CROPS FOR 1845—CONTINUED.

State or Territory.	Potatoes.	Hay.	Flax and Hemp.	Tobacco.	Cotton.	Rice.	Silk Cocoons.	Sugar.
	Bushels.	Tons.	Tons.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.
Maine - - - -	8,613,000	1,877,000	—	—	—	—	944	300,000
New Hampshire - -	3,714,000	526,000	—	—	—	—	1,210	2,200,000
Massachusetts - -	3,038,000	530,000	—	123,000	—	—	47,110	500,000
Rhode Island - -	650,000	46,000	—	—	—	—	1,250	
Connecticut - - -	1,694,000	458,000	—	794,000	—	—	220,000	50,000
Vermont - - -	4,926,000	1,139,000	—	—	—	—	13,740	10,000,000
New York - - -	21,986,000	3,703,000	—	—	—	—	7,850	14,500,000
New Jersey - - -	1,757,000	282,000	—	—	—	—	6,240	
Pennsylvania - -	5,497,000	1,527,000	—	535,000	—	—	41,370	1,600,000
Delaware - - -	155,000	19,000	—	—	—	—	5,500	
Maryland - - -	705,000	56,000	—	17,920,000	6,000	—	10,240	
Virginia - - -	1,899,000	296,000	—	30,218,000	2,412,000	2,500	9,260	1,700,000
North Carolina - -	2,711,000	67,000	—	10,373,000	40,000,000	3,000,000	8,850	9,000
South Carolina - -	2,520,000	16,000	—	40,000	45,000,000	66,500,000	7,620	30,000
Georgia - - -	1,536,000	13,000	—	195,000	205,000,000	14,500,000	8,430	350,000
Alabama - - -	1,635,000	15,000	—	341,000	145,000,000	280,000	7,890	12,000
Mississippi - - -	3,040,000	1,000	—	193,000	235,000,000	975,000	300	
Louisiana - - -	1,299,000	26,000	—	—	185,000,000	3,800,000	1,570	175,000,000
Tennessee - - -	2,256,000	42,000	1,500	37,109,000	48,000,000	9,000	30,110	520,000
Kentucky - - -	1,508,000	123,000	22,500	63,310,000	1,200,000	17,000	6,970	2,100,000
Ohio - - - -	4,120,000	1,251,000	500	7,576,000	—	—	39,370	3,900,000
Indiana - - -	2,680,000	1,351,000	500	3,520,000	—	—	1,150	8,000,000
Illinois - - -	2,631,000	297,000	500	1,168,000	270,000	—	4,680	600,000
Missouri - - -	875,000	77,000	12,500	13,744,000	200,000	—	290	450,000
Arkansas - - -	642,000	1,000	—	—	17,000,000	6,500	300	5,000
Michigan - - -	4,555,000	214,000	—	—	—	—	1,900	3,000,000
Florida - - -	255,000	1,000	—	260,000	12,000,000	675,000	590	750,000
Wisconsin Territory -	938,000	84,000	—	—	—	—	40	300,000
Iowa Territory - -	516,000	26,000	—	—	—	—	—	150,000
District of Columbia -	41,000	1,000	—	—	—	—	1,500	
	88 392,000	14,065,000	37,500	187,422,000	936,088,000	89,765,000	486,530	226,026,000

From the Massachusetts Ploughman.

Preserving Currants.

Mr. Editor,—In the article on "Gooseberries," published in the Ploughman of the 2nd inst., I notice the following direction for preserving the fruit green,—"The unripe berries may be preserved in a fresh state through the winter, in bottles filled up with cold or boiling water, corked and sealed tight, and placed in a cool cellar,—and some say, buried with the cork downwards."

This may be true, still I should doubt the propriety of "filling up the bottles with *cold* or *boiling water*."

For the last ten or twelve years I have been in the habit of preserving *green currants* in considerable quantities, for domestic use, and find them not only a luxury, but a great convenience. My mode of preserving them is simply this. I gather the currants while green, or before they turn red, put them into *dry glass* bottles, cork and seal them tight; then place them in the cellar, in such a position as is most convenient. In this manner green currants have been preserved in my cellar for years. I have also preserved gooseberries in the same manner, and with equal success. I have green currant pies on my table at all seasons of the year, when other *green* fruit cannot be readily obtained. And if you, or any of your friends, will call at my house, I shall be happy to wait upon and furnish you with green currant pies at *any* season of the year.

M. S. Wilson.

Berkshire Coffee House, Lenox,
May 4th, 1846.

New Facts Relative to the Potatoe Disease.—We are informed by Mr. T. C. Peters, of Darien, that he has lost by rot something like 1000 bushels of potatoes this season, and has observed the important fact that a field of potatoes, whose stems and leaves were evidently affected with the blight, had its tubers *preserved* from all injury by the action of a frost that killed the potatoe tops dead. This crop grew on a low piece of ground, and subject to frost. Another field hard by, similarly affected, escaped the frost, and most of the potatoes rotted in the hill. His early potatoes all escaped the malady.

Another fact is this. Mr. Pearce, of Hamburg, who is an excellent and observing farmer, saw his potatoe vines were affected, and pulled several hills to examine the roots. They were sound, and left separated from the stems or tops. By this separation three hills wholly escaped the rot, while the potatoes in all the adjoining hills were rotten at the time of harvest.—*Farmer & Mechanic.*

Circulation of matter in the Animal and Vegetable Kingdoms.

In the immense, yet limited expanse of the ocean, the animal and vegetable kingdoms are mutually dependent upon, and successive to each other. The animals obtain their constituent elements from the plants, and restore them to the water in their original form, when they again serve as nourishment to a new generation of plants.

The oxygen which marine animals withdraw in their respiration from the air, dissolved in sea-water, is returned to the water by the vital processes of sea plants; that air is richer in oxygen than atmospheric air, containing 32 to 33 per cent., while the latter contains only 21 per cent. Oxygen also combines with the products of the putrefaction of dead animal bodies, changes their carbon into carbonic acid, their hydrogen into water, and their nitrogen assumes again the form of ammonia.

Thus we observe in the ocean a circulation takes place without the addition or subtraction of any element, unlimited in duration, although limited in extent, inasmuch as in a confined space the nourishment of plants exists in a limited quantity.

We well know that marine plants cannot derive a supply of *humus* for their nourishment through their roots. Look at the great sea-tang, the *Fucus Gigantius:* this plant, according to Cook, reaches a height of 360 feet, and a single specimen, with its immense ramifications, nourishes thousands of marine animals; yet its root is a small body, no larger than the fist. What nourishment can this draw from a naked rock, upon the surface of which there is no perceptible change? It is quite obvious that these plants require only a hold—a fastening to prevent a change of place—as a counterpoise to their specific gravity, which is less than that of the medium in which they float. That medium provides the necessary nourishment, and presents it to the surface of every part of the plant. Sea-water contains not only carbonic acid and ammonia, but the alkaline and earthy phosphates and carbonates required by these plants for their growth, and which we always find as constant constituents of their ashes.

All experience demonstrates that the conditions of the existence of marine plants are the same which are essential to terrestrial plants. But the latter do not live, like sea plants, in a medium which contains all their elements, and surrounds with appropriate nourishment every part of their organs; on the contrary, they require two media, of

which one, namely, the soil, contains those essential elements which are absent from the medium surrounding them, that is, the atmosphere.

Is it possible that we could ever be in doubt respecting the office which the soil and its component parts subserve in the existence and growth of vegetables?—that there should have been a time when the mineral elements of plants were not regarded as absolutely essential to their vitality? Has not the same circulation been observed on the surface of the earth, which we have just contemplated in the ocean,—the same incessant change, disturbance, and restitution of equilibrium?

Experience in agriculture shows that the production of vegetables on a given surface increases with the supply of certain matters, originally parts of the soil which had been taken up from it by plants—the excrements of man and animals. These are nothing more than matters derived from vegetable food, which, in the vital processes of animals, or after their death, assume again the form under which they originally existed, as parts of the soil. Now, we know that the atmosphere contains none of these substances, and therefore can replace none; and we know that their removal from a soil destroys its fertility, which may be restored and increased by a new supply.

Is it possible, after so many decisive investigations into the origin of the elements of animals and vegetables, the use of the alkalies, of lime and the phosphates, any doubt can exist as to the principles upon which a rational agriculture depends? Can the art of agriculture be based upon any thing but the restitution of a disturbed equilibrium? Can it be imagined that any country, however rich and fertile, with a flourishing commerce, which for centuries exports its produce in the shape of grain and cattle, will maintain its fertility, if the same commerce does not restore, in some form of manure, those elements which have been removed from the soil, and which cannot be replaced by the atmosphere? Must not the same fate await every such country which has actually befallen the once prolific soil of Virginia, now in many parts no longer able to grow its former staple productions—wheat and tobacco?

In the large towns of England, the produce both of English and foreign agriculture is largely consumed; elements of the soil indispensable to plants do not return to the fields—contrivances resulting from the manners and customs of English people, and peculiar to them, render it difficult, perhaps impossible, to collect the enormous quantity of the phosphates, which are daily, as solid and liquid excrements, carried into the rivers. These phosphates, although present in the soil in the smallest quantity, are its most important mineral constituents. It was observed that many English fields exhausted in that manner, immediately doubled their produce, as if by a miracle, when dressed with bone earth imported from the continent. But if the export of bones from Germany is continued to the extent it has hitherto reached, our soil must be gradually exhausted; and the extent of our loss may be estimated, by considering that one pound of bones contains as much phosphoric acid as a hundred weight of grain.

The imperfect knowledge of nature, and the properties and relations of matter, possessed by the alchemists, gave rise, in their time, to an opinion that metals as well as plants, could be produced from a *seed*. The regular forms and ramifications seen in crystals, they imagined to be the leaves and branches of metal plants; and as they saw the seed of plants grow, producing root, stem, and leaves, and again blossoms, fruits and seeds, apparently without receiving any supply of appropriate material, they deemed it worthy of zealous inquiry to discover the *seed* of gold, and the earth necessary for its development. If the metal-seeds were once obtained, might they not entertain hopes of their growth? Such ideas could only be entertained when nothing was known of the atmosphere, and its participation with the earth, in administering to the vital processes of plants and animals. Modern chemistry indeed produces the elements of water, and, combining them, forms water anew; but it does not *create* those elements—it derives them from water; the new-formed artificial water has been water before.

Many of our farmers are like the alchemists of old,—they are searching for the miraculous seed—the means which, without any further supply of nourishment to a soil scarcely rich enough to be sprinkled with indigenous plants, shall produce crops of grain a hundredfold.

The experience of centuries, nay, of thousands of years, is insufficient to guard men against these fallacies; our only security from these and similar absurdities must be derived from a correct knowledge of scientific principles.

In the first period of natural philosophy, organic life was supposed to be derived from water only; afterward, it was admitted that certain elements derived from the air, must be superadded to the water; but we *now*

know that other elements must be supplied by the earth, if plants are to thrive and multiply.

The amount of materials contained in the atmosphere, suited to the nourishment of plants, is limited; but it must be abundantly sufficient to cover the whole surface of the earth with a rich vegetation. Under the tropics, and in those parts of our globe where the most genial conditions of fertility exist—a suitable soil, a moist atmosphere, and a high temperature,—vegetation is scarcely limited by space; and where the soil is wanting, it is gradually supplied by the decaying leaves, bark, and branches of plants. It is obvious there is no deficiency of atmospheric nourishment for plants in those regions, nor are these wanting in our own cultivated fields: all which plants require for their development is conveyed to them by the incessant motions of the atmosphere. The air between the tropics contains no more than that of the arctic zones; and yet how different is the amount of produce of an equal surface of land in the two situations!

This is easily explicable. All the plants of tropical climates, the oil and wax palms, the sugar-cane, &c., contain only a small quantity of the elements of the blood necessary to the nutrition of animals, as compared with our cultivated plants. The tubers of the potatoe in Chili, its native country, where the plant resembles a shrub, if collected from an acre of land, would scarcely suffice to maintain an Irish family for a single day. The result of cultivation in those plants which serve as food, is to produce in them those constituents of the blood. In the absence of the elements essential to these in the soil, starch, sugar, and woody fibre are perhaps formed; but no vegetable fibrine, albumen, or caseine. If we intend to produce on a given surface of soil, more of these latter matters than the plants can obtain from the atmosphere, or receive from the soil of the same surface in its uncultivated and normal state, we must *create* an artificial atmosphere, and add the needed elements to the soil.

The nourishment which must be supplied in a given time to different plants, in order to admit a free and unimpeded growth, is very unequal.

On pure sand, on calcarecus soil, on naked rocks, only a few genera of plants prosper, and these are, for the most part, perennial plants. They require, for their slow growth, only such minute quantities of mineral substances as the soil can furnish, which may be totally barren for other species. Annual, and especially summer plants, grow and attain their perfection in a comparatively short time; they therefore do not prosper on a soil which is poor in those mineral substances necessary to their development. To attain a maximum in height in the short period of their existence, the nourishment contained in the atmosphere is not sufficient. If the end of cultivation is to be obtained, we must create in the soil an artificial atmosphere of carbonic acid and ammonia; and this surplus of nourishment, which the leaves cannot appropriate from the air, must be taken up by the corresponding organs, that is, the roots, from the soil. But the ammonia, together with the carbonic acid, are alone insufficient to become part of a plant destined to the nourishment of animals. In the absence of the alkalies, the phosphates and other earthy salts, no vegetable fibrine, no vegetable caseine, can be formed. The phosphoric acid of the phosphate of lime, indispensable to the cerealia and other vegetables in the formation of their seeds, is separated as an excrement, in great quantities, by the rind and barks of ligneous plants.

How different are the evergreen plants, the oleaginous plants, the mosses, the ferns, and the pines, from our annual grasses, the cerealia and leguminous vegetables! The former, at every time of the day during winter and summer, obtain carbon through their leaves by absorbing carbonic acid, which is not furnished by the barren soil on which they grow; water is also absorbed and retained by their coriaceous or fleshy leaves with great force. They lose very little by evaporation, compared with other plants. On the other hand, how very small is the quantity of mineral substances which they withdraw from the soil during their almost constant growth in one year, in comparison with the quantity which one crop of wheat of an equal weight receives in three months!

It is by means of moisture that plants receive the necessary alkalies and salts from the soil. In dry summers a phenomenon is observed, which, when the importance of mineral elements to the life of a plant was unknown, could not be explained. The leaves of plants first developed and perfected, and therefore nearer the surface of the soil, shrivel up and become yellow, lose their vitality, and fall off while the plant is in active state of growth, without any visible cause. This phenomenon is not seen in moist years, nor in evergreen plants, and but rarely in plants which have long and deep roots, nor is it seen in perennials in autumn and winter.

The cause of this premature decay is now obvious. The perfectly developed leaves absorb continually carbonic acid and ammonia from the atmosphere, which are converted

into elements of new leaves, buds, and shoots; but this metamorphosis cannot be effected without the aid of the alkalies, and other mineral substances. If the soil is moist, the latter are continually supplied to an adequate amount, and the plant retains its lively green colour; but if this supply ceases from a want of moisture to dissolve the mineral elements, a separation takes place in the plant itself. The mineral constituents of the juice are withdrawn from the leaves already formed, and are used for the formation of the young shoots; and as soon as the seeds are developed, the vitality of the leaves completely ceases. These withered leaves contain only minute traces of soluble salts, while the buds and shoots are very rich in them.

On the other hand, it has been observed, that where a soil is too highly impregnated with soluble saline materials, these are separated upon the surface of the leaves. This happens to culinary vegetables especially, whose leaves become covered with a white crust. In consequence of these exudations the plant sickens, its organic activity decreases, its growth is disturbed; and if this state continues long, the plant dies. This is most frequently seen in foliaceous plants, the large surfaces of which evaporate considerable quantities of water. Carrots, pumpkins, peas, &c., are frequently thus diseased, when, after dry weather, the plant being near its full growth, the soil is moistened by short showers, followed again by dry weather. The rapid evaporation carries off the water absorbed by the root, and this leaves the salts in the plant in a far greater quantity than it can assimilate. These salts effloresce upon the surface of the leaves, and if they are herbaceous and juicy, produce an effect upon them as if they had been watered with a solution containing a greater quantity of salts than their organism can bear.

Of two plants of the same species, this disease befalls that which is nearest its perfection; if one should have been planted later, or be more backward in its development, the same external cause which destroys the one will contribute to the growth of the other.—*Liebig's Letters.*

The Death of Dr. Mease.

At a special meeting of the Philadelphia Society for promoting Agriculture, held on the 20th inst., agreeably to public notice, in reference to the decease of the late President, Dr. James Mease, Vice President Kenderton Smith, in the chair:

The object of the meeting having been stated by the Vice President, with appropriate remarks on the life and character of the deceased, it was on motion of William S. Torr, unanimously

Resolved, That this Society has learned with deep regret the death of our venerable President, Doctor James Mease, after having passed through a long life devoted to science and philanthropy, and whose zeal in the cause of agriculture has contributed essentially to its advancement.

Resolved, That this Society mourns the loss of so valuable a member, and deeply sympathises with his afflicted family in this dispensation of Divine Providence.

Resolved, That a committee be appointed to convey to his family the foregoing resolutions. Whereupon, Wm. S. Torr, A. S. Roberts, Cornelius S. Smith, and Col. Kenderton Smith, were appointed said committee. Extract from the minutes.

Aaron Clement, *Rec. Sec'ry.*

Philadelphia, May 21st, 1846.

Premiums of the Pennsylvania Horticultural Society.

The following will be awarded at the intermediate meeting on the 7th prox. The premiums for this month were given in our last number.

Carnations—For the best Flake, four named varieties to be exhibited, $2.

For the best Bizarre, do. $2.

For the best Picotee, do. $2.

For the best American seedling, $2.

Cauliflowers—For the best, grown in the open ground without protection, four heads to be exhibited, $3.

For the next best do. $2.

At the Stated meeting on the 21st.

Raspberries—For the best, two quarts to be exhibited, $2.

For the next best do. do. $1.

Currants—For the best Red, two quarts to be exhibited, $2.

For the best White, do. do. $2.

For the best Black, do. do. $2.

Gooseberries—For the best, named, one quart, in a ripe state, do. $2.

Apricots—For the best named, two dozen to be exhibited, $2.

For the next best named, do. do. $1.

Apples—For the best named, early, half a peck, do. $2.

Who does not know, says the Genesee Farmer, that when the tillers of the earth prosper, all other classes participate in an equal degree?

Premiums offered by the Agricultural Society of Newcastle Co., Del.,

At the Fall Exhibition, Cattle Show and Ploughing Match, to be held at Wilmington on Wednesday, the 16th of September, 1846.

HORSES.

For the best thorough bred stud horse, certificate of merit.

For the next best do., certificate of merit.

For the best stud horse for field and road, certificate of merit.

For the best pair of carriage horses, certificate of merit.

For the best saddle horse, Farmers' Encyclopedia.

For the best pair of work horses, certificate of merit.

For the next best do., certificate of merit.

For the best thorough bred mare, certificate of merit.

For the best mare for field and road, Youatt on Horses.

For the best horse colt from two to three years old, Colt Bridle.

For the best horse colt from one to two years old, Farmers' Cabinet one year.

For the best mare colt from two to three years old, Colt Bridle.

For the best mare colt from one to two years old, Farmers' Cabinet one year.

For the best colt under one year old, Farmers' Land Measurer.

CATTLE.

For the best bull, Washington's Letter on Agriculture.

For the second best do., Youatt on Cattle.

For the third best do., Farmers' Cabinet one year.

For the best pair of fat cattle, Treatise on Cattle.

For the best fat steer, Clater and Youatt's Cattle Doctor.

For the best lot of grass fed steers, not less than six in number, Farmers' Encyclopedia.

For the best lot of fat heifers, not less than six in number, Farmers' Encyclopedia.

For the best cow, the latest improved Churn.

For the second best do., superior Butter Tub.

For the third best do., Farmers' Encyclopedia.

For the best bull calf from one to two years old, certificate of merit.

For the best bull calf under one year old, Farmers' Cabinet one year.

For the best heifer calf from two to three years old, Colman's Reports.

For the best heifer calf from one to two years old, Youatt on Cattle.

For the best heifer calf under one year old, Cultivator one year.

For the best lot of store calves not less than six in number, Colman's Reports.

For the best pair of working oxen, Skinner's Farmers' Library.

For the second best do., Youatt on Cattle.

For the third best do., Muck Manual.

For the best pair of four-year old steers, Youatt on Cattle.

For the best and best broke pair three-years old, Farmers' Cabinet one year.

SHEEP.

For the best long-wooled buck, Blacklock's Treatise on Sheep.

For the next best do., certificate of merit.

For the four best long-wooled ewes, Farmers' Cabinet one year.

For the four next best do., certificate of merit.

For the best short-wooled buck, Treatise on Sheep.

For the next best do., certificate of merit.

For the four best short-wooled ewes, New England Farmer, 1 vol.

For the four next best do., certificate of merit.

For the four best lambs of any breed, Cultivator one year.

For the four next best lambs of any breed, certificate of merit.

HOGS.

For the best boar over one year old, Farmers' Encyclopedia.

For the second best do., Farmers' Cabinet one year.

For the best boar under one year old, Farmers' Encyclopedia.

For the best sow over one year old, Farmers' Encyclopedia.

For the best sow under one year old, Skinner's Farmers' Library.

For the next best do., American Farmer one year.

For the best litter of pigs, not less than five, Colman's Reports.

For the next best do., American Farmer.

MANAGEMENT OF FARMS.

For the most extensive, valuable and economical improvements in the cultivation and management of an entire farm, with all its appendages, within the last *five years.*

A detailed statement of the management and produce will be expected by the 15th of November.

Notice of intention to claim these premi-

ums must be given to the Secretary on or before the 20th of June.

The committee will visit such farms as may be entered, in July and September.

COMPOST MANURE.

To the person who shall make the most satisfactory, and in the judgment of the committee, the most useful experiment in composting manure, not less than 100 loads of 40 cubic feet, before October 1st, 1846;—Premium—Skinner's Farmers' Library.

FOWLS.

For the largest and best variety of domestic fowls, Diploma.

IMPROVING WET MEADOW OR SWAMP LANDS.

For the best conducted experiment in reclaiming wet meadow or swamp lands, on not less than one acre, the course of management and the produce, &c., for a period of two years, at least, to be detailed, with a statement of all incidental expenses; Premium—a piece of plate of the value of $10.

TURNING IN CROPS AS A MANURE.

For the most satisfactory experiment of turning in crops as a manure, either *green or dry*, on not less than one acre of land, a detailed account of the whole process to be given in writing; Premium—a Diploma.

EXPERIMENTS ON MANURES.

For an exact and satisfactory experiment in the preparation and application of manures, either animal, vegetable, or mineral.

TO THE BEST TENANT OR RENTER OF A FARM.

Having reference to his skill and management, the care he takes of the property, and the returns he makes to the landlord; Premium by the Society—a Diploma: and a volunteer premium by a member of the Society, of a silver cup of the value of $10.

For the second best do., a Diploma.

TO THE BEST FOREMAN OR FARM MANAGER.

Having reference to his skill as a farmer, his management of the hands on the farm, the attention he bestows upon the stock, the care he takes of the tools and the implements of the farm, and his industry and fidelity in discharging in all respects the duties of his situation; Premium—a piece of plate of the value of $5, Washington's Letters on Agriculture, and a Diploma.

TO THE BEST FARM HAND.

Having reference to his skill as a ploughman, sower, mower, cradler, &c., a piece of plate of the value of $5, and a Diploma.

TO THE FARM LABOURER OR RENTER.

Who while working on a farm, cultivates with the assistance of his family, the best garden, and provides the most neat and comfortable home; Premium—being volunteered by a member—a silver medal, a spade, a garden rake, and two fleeces of wool.

CROPS.

For the best crop of wheat, not less than 30 bushels per acre, and not less than five acres, $10.

For the next best do., not less than two acres, $5.

For the best crop of corn over 70 bushels per acre, and not less than two acres, $10.

For the next best do., Farmers' Cabinet one year.

For the best crop of oats over 60 bushels per acre, and not less than four acres, $5.

For the next best do., Farmers' Cabinet one year.

For the best crop of grass, making not less than two and a half tons of hay per acre, nor less than three acres, Colman's Reports.

For the best crop of potatoes, not less than 300 bushels per acre, not less than one acre, Agricultural Encyclopedia.

For the best crop of ruta-baga turnip of one acre or more, not less than 800 bushels per acre, Colman's Reports.

For the best crop of sugar beet of half an acre or more, and not less than 25 tons to the acre, Colman's Reports.

For the best crop of flat turnips, quarter of an acre or more, not less than at the rate of 300 bushels per acre, Farmers' Cabinet one year.

For the best crop of sweet potatoes, not less than quarter of an acre, Farmers' Cabinet one year.

For the best field of potatoes, not less than three acres, Colman's Reports.

BUTTER AND CHEESE.

For the best new milk cheese, Colman's Reports.

For the best fresh butter, not less than five pounds, Churn.

For the next best do., do., Butter Tub.

For the best potted or preserved butter, not less than twenty pounds, nor less than two months old, Colman's Reports.

For the next best do. do., three stone butter pots.

CULINARY VEGETABLES.

For the best and greatest variety of garden vegetables, $10.

For the second best do., $5.

For the third best do., Colman's Reports.

For the best cabbage, not less than six heads, to be produced on or before the Fall Exhibition of 1846, Bridgman's Gardeners' Assistant.

For the best cauliflower, not less than three heads, Vegetable Physiology.

For the best kale, not less than three bunches of one pound each, to be produced by November 21st, 1846, Farmers' Cabinet one year.

For the best bunch beans, not less than half a peck, to be produced on or before June 25th, 1846, Cultivator one year.

For the best half peck of onions, raised from the seed, Farmers' Cabinet one year.

For the best bunch of onions, certificate of merit.

For the best tomatoes, not less than one peck, certificate of merit.

For the best egg plants, not less than half a dozen, certificate of merit.

FRUITS.

For the best strawberries, not less than two quarts, to be produced on or before July 1st, 1846, Farmers' Cabinet one year.

For the best raspberries, not less than three quarts, to be produced before June 20th, 1846, Cultivator one year.

For the best early pears, not less than half a peck, to be produced on or before July 20th, 1846, China fruit basket.

For the best fall pears, not less than half a peck, to be produced on or before November 21st, 1846, China fruit basket.

For the best winter pears, not less than half a peck, to be produced between the 1st and 17th of March, 1847, China fruit basket.

For the best native grapes, not less than four bunches, to be produced between the 17th and 22nd of October, 1846, Bridgman's Gardeners' Assistant.

For the best plums, the least liable to injury from insects, not less than two dozen, to be produced on or before the 5th of October, 1846, Farmers' Cabinet one year.

For the best quinces, not less than half a peck, to be produced at the Fall Exhibition of 1846, Cultivator one year.

For the best peaches, not less than half a peck, to be produced at the Horticultural exhibition, a handsome fruit basket.

For the best apples, not less than half a peck, premium saw.

For the second best do. do., pruning knife.

FLOWERS.

For the best varieties of camellias, to be produced to the Society by March 1847, certificate of merit.

For the best varieties of roses, to be produced to the Society in May or June, 1847, certificate of merit.

For the best variety of double pinks, to be produced on or before the 15th of June, 1847, certificate of merit.

For the best varieties of hyacinths, to be produced to the Society on or before May 20th, 1847, certificate of merit.

For the six best varieties of tulips, to be produced on or before May 20th, 1847, certificate of merit.

For the six best varieties of dahlias, to be produced on or before October 20th, 1846, certificate of merit.

For the ten best varieties of chrysanthemum, to be produced on or before Nov. 21st, 1846, certificate of merit.

For the best bouquet exhibited at the exhibitions of the Society, certificate of merit.

For the introduction of any new and valuable seeds, fruits, or plants, presented to the Society during the years 1846–7, a silver medal of the value of three to five dollars, at the discretion of the Board of Directors.

The committee in their discretion, are authorized to invite the ladies to consent to take the sole charge of the Horticultural Exhibition.

SILK.

For the best reeled raw silk, if approved, not less than a pound, a premium silk reel.

For the heaviest and best cocoons, excluding double ones, not less than five pounds, Treatise on Silk.

AGRICULTURAL IMPLEMENTS.

For the best plough, certificate of merit.

For the best drilling machine, do. do.

For the best grain or grass sowing machine, do. do.

For the best mowing or reaping machine, do. do.

For the best straw and hay cutter, do. do.

For the best root or vegetable cutter, do.

For the best corn sheller, do. do.

For the best display of agricultural implements, do. do.

For the best thrashing machine, do. do.

For the best farm and road wagon, do. do.

For the best cart, do. do.

For the best and most convenient harvest bed on wagon or cart wheels, do. do.

IMPROVEMENT OF AGRICULTURAL IMPLEMENTS.

To the person who shall exhibit at the show any new or improved agricultural implement, the invention being his own, which shall, in the opinion of the committee merit a reward, a premium shall be given not exceeding five dollars.

In all cases proof must be given of the work done by the implement before it is exhibited, and of its having been used and approved by some practical farmer.

MAIZE SUGAR.

For the largest quantity of sugar—having regard to quality—not less than 20 lbs., manufactured from corn stalks, Colman's Reports.

AMERICAN MANUFACTURE.

For the best American "Russia iron," certificate of merit.

For the best piece of fine broad cloth, do. do.

For the best lot of cassinetts, not less than three pieces, do. do.

For the best lot of fine satinetts, not less than three pieces, do. do.

For the best specimen of cotton goods, do. do.

For the best ingrain piece of carpeting, do. do.

For the handsomest and best made saddle and bridle, do. do.

For the handsomest and best set of single or double harness, do. do.

For the best lot of edge tools, do. do.

For the best constructed cooking stove, do. do.

For the best lot of cabinet furniture not less than three pieces, do. do.

For the handsomest and best parlour stove, do. do.

For the handsomest and best made marble mantel, do. do.

For the handsomest and best made boots and shoes, three pairs of each, do. do.

For the handsomest and best manufactured hat, do. do.

For the handsomest lot of manufactured silverware, do. do.

For the best and most convenient four-wheel carriage or dearborn for family use, and having regard to cost, do. do.

For the handsomest and best specimen of castings, do. do.

For the best sample of coach or shoe leather, do. do.

☞ All to be made in Newcastle county, and premiums to be awarded to any domestic articles not enumerated as above, at the discretion of the Board of Directors.

Ploughing Match for horses and oxen—single or double teams, with or without drivers.

In first class all entries to be by ploughmen over 19 years of age.

In second class between 14 and 19 years of age.

In third class those under 14 years.

First premium for first class, $10 and a diploma.

Second do. do. do. $5 and a diploma.

Third do. do. do. Washington's Letters on Agriculture.

Fourth do. do. do. a diploma.

First premium for second class, $5, Washington's Letters on Agriculture and diploma.

Second do. do. do. Farmers' Library and diploma.

Third do. do. do. diploma.

First premium for third class, or boys, Youatt on Cattle, Farmers' Library, and diploma.

Second do. do. do. Washington's Letters and diploma.

Third do. do. do. Farmers' Cabinet one year and diploma.

Fourth do. do. do. a diploma.

Claims for premiums on crops, must in every instance be accompanied with a statement of the condition of the ground before commencing, and then the whole process of tillage, and the measurement must be of the whole crop by the half bushel, and certified to in writing by the applicant. Crops to be entered as early as the day of Exhibition—applications to be acted on by the committee any time before the 1st of January, 1847.

No animal shall take the same premium a second time.

All articles exhibited will be returned to contributors unless otherwise directed.

If, of any article for which a premium is offered, no specimen be submitted worthy of distinction, the Society reserves the power to withhold the premiums, and in all cases where premiums shall be demanded, they will require such evidence from the claimants as shall be satisfactory to the Directors. No person shall be entitled to a premium for any animal which he shall not have had or possessed at least six months immediately preceding the time of exhibition. It is to be distinctly understood that all grain, vegetables, &c., produced for competition, shall be the growth of the producer.

All premiums not demanded within sixty days after they shall have been awarded, shall be deemed as having been relinquished to the Society. The object of the Society

in offering these premiums, is simply to excite a spirit of emulation among cultivators to improve the varieties of fruits, vegetables, and other productions. It is desirable that each kind of fruit offered for competition may be as numerous as possible, regard being had to produce none but of fair quality. Each article should be accompanied by its appropriate name. It is also desirable that the articles exhibited should be accompanied by short observations on the mode of culture, with any other remarks deemed to be of utility.

The judges are authorized to withhold premiums where none is entitled to distinction; and where but one of a class is exhibited they will award such premium as they think it merits. Those who intend to compete, must inform the Committee of Arrangement before eleven o'clock on the day of exhibition.

All stock, &c., exhibited, must remain on the ground during the exhibition; and all stock intended for sale will be required to be registered in a book provided by the Committee of Arrangement, at the following rates: For each horse, $2; for neat cattle, $1 each; for hogs and sheep, fifty cents each.

Articles that are designed to compete for premiums, will be produced when practicable, at the Annual Exhibitions of the Society. Perishable articles may be offered at any of the meetings of the Society, or at those of the Directors, which take place on the afternoon of the second Saturday of every month in the City Hall; or they may be subjected to the inspection at any time, of either of the following committee appointed for that purpose, viz: Dr. J. W. Thomson, M. Canby, J. R. Latimer, Samuel Hilles, Dubre Knight.

The books for the admission of new members, will be open by James Webb, Secretary, at Hall's Hotel, from nine o'clock until two and a half, on each day of the Exhibition; price reduced to $2, which includes the annual dinner—dinner tickets delivered by the Secretary.

The Society will dine together at three o'clock. All members *not* in arrears to the Society, will receive their tickets to the dinner free of charge. The Annual Address will be delivered by a distinguished agriculturist, at John Hall's Hotel, immediately after dinner.

If you would have a supply of horse-radish through the winter, have a quantity grated while the plant is in perfection; put it in bottles, which fill with good vinegar, and keep tightly corked.

ADDRESS

Delivered before the Moorestown Agricultural Society, Burlington Co., N. J., on the 2nd inst., by Dr. Joseph Parrish.

Gentlemen,—To understand agriculture in its true meaning, we must study the book of nature; we must exercise our noblest thoughts, to comprehend the phenomena which are daily revealed to us in the operations of those laws which regulate the economy of vegetable life.

Galileo, a profound philosopher, when interrogated by the inquisition as to his belief in a Supreme Being, pointed to a straw on the floor of his dungeon, and replied, that from the structure of that object alone, he inferred the existence of an intelligent Creator. When I received through your corresponding secretary an invitation to address you on this occasion, the first thought that occurred to me was, that this would be a theme well calculated to satisfy us with the effort which has been made by the formation of this Society to trace effects to their causes, and to inspire us with zeal in the application of physical science to the pursuit of agriculture. The farmer of the present age ought not to be satisfied with mere bodily rest at the close of his daily labours; his mind should hunger for that knowledge which will unfold to him hidden mysteries—he should want to see, as did Galileo, a wonderful mechanism even in a simple straw. He should seek after light that will show him what there is in the bosom of the earth, that causes the seed to burst its shell and germinate into life—what influences surround it that promote its growth and fruitfulness. Not that he should perplex himself with abstruse and doubtful questions—but that he should strive to be exalted above the brute that labours with him, by cultivating the intellect, by studying the philosophy of nature, that he may see in every flower that blooms in his garden, in every ear that grows in his field, and in every blade that springs up in his meadow, the wisdom and design of a beneficent Creator; and as he cultivates a taste for such researches, his fondness for home and the labours of his farm will become stronger, and his instructions to his children will be their surest protection against the allurements of city life, which tempt so many to depart from the straight forward path of honest husbandry. In all nations of the world, where civilization has extended its blessings, agriculture is nurtured as the purest and most certain source of public prosperity. Wherever government is found protecting the farming interests and sustaining a system of well-

paid labour, the soil will become the strongest hold of national wealth and happiness; and in no country are advantages placed within the reach of the agriculturist equal to those which are found in Northern America. Here the husbandman is not borne down by the tithes and impositions of feudal power; the choicest productions of his labour are not exacted by government to gratify an idle and corrupt aristocracy, but as he waters the soil with the sweat of his brow, so does he reap the fruits which she returns to him, and it is the glory of his country that he can devote them to himself, and not be compelled to share them with kings:—that his children, reared in habits of careful industry, may gather its proceeds without dividing them among those playthings of royalty—the babies of queens. His private interest is identified with the public good, and whatever will advance the one, will promote the other. His strength is acknowledged, and his importance appreciated by the nation, and it is time that he *felt himself* rising into the dignity of his exalted position—time that he should cease labouring as a mere automatan, following in the wake of his fathers, and guided by their, instead of his own, experience,—time that he should study and pursue agriculture as a science, that he should acquaint himself with those natural laws which are continually in operation, and are producing the developments which are daily obvious to his senses, but which he cannot understand:—that he should know the action that is produced upon vegetation, by the elements which surround him.

We know already that the harvest will not ripen without the heat and light of the sun—we know that the rain which falls upon our fields is necessary to the production of their fruits—we know that the soil upon which we sow the seed becomes impaired, its fertility exhausted by a too frequent repetition of similar crops; but have we ever inquired whether the roots which push themselves into the earth, have mouths to drink in the rain, and take up from the soil, nourishment for their support and growth? Have we ever investigated the properties of light and heat, and traced their application to the development and final decay of vegetable matter? Have we ever learned, or attempted to learn the peculiar adaptation of certain manures to the different varieties of soil, and the properties of both that may combine to promote luxuriant growth? In reflecting upon the fact of our own existence, did we ever form a conception of the vital principle that gives us motion and sensibility, and think of plants as being possessors of a degree of the same stimulating force—whatever may be its name—and giving to them powers of production, increase, and complete development? And did we ever imagine that the plants which we tread under our feet, have organs of respiration, assimilation, secretion, and excretion, as necessary to their existence as the same class of organs are to the support of ours? And when we remember that there is coursing through all parts of our bodies a vital fluid, without which we could not have a being, did the truth ever present itself to our minds, that the tree which the axe in our hands levels to the ground, possesses a vital current also, which not only circulates through all its parts, but throws out into the atmosphere, the very principle which we inhale into our lungs, to purify and vivify our blood, and render it capable of sustaining life.

These are propositions which it will be interesting for us to consider. It is true that the mechanical arrangements which are necessary to the sustenance and growth of animals and vegetables, as well as the fluids which pass through them, are widely different; but in both alike there is an eminently wise adaptation of means to the end, which we can not but admire. As plants are destined to observe a fixed position, and have not, as animals, the power of locomotion, and at the same time require the agency of the surrounding elements to support them, let us see what contrivance has been adopted to carry out these particular purposes. Take a seed—a grain of wheat—carry it, if you please, from some ancient tomb, where it may have been buried for centuries with the dead; with others it was one day rudely beaten from its hull by the flail of the thresher; with others, too, it may have been packed in heaps and trodden under foot, yet there still remains safely secured in its centre, a little germ that is ready to put forth its vital energies as soon as it may come in contact with its appropriate stimulus. Cast it upon the prepared soil. It matters not in what direction the seed may fall, or what position it occupies. If the end from which the sprout comes is pushed downward into the earth, it nevertheless finds its way through the wall that has imprisoned it, and soon bends its direction toward the surface; the roots which spring from the other end, at first tending upward, soon turn themselves in the opposite direction, until they occupy their appropriate relation to the plant. Having now made its attachments to the earth, and established the primary means of communication with the sources of nourishment, it is prepared to bring into action the numerous

organs that in their turn become developed, to carry on the great function of nutrition and growth. And it is the business of the husbandman to acquaint himself with these functions.

Without going minutely into vegetable physiology, it will be sufficient for our present purpose to know that the elementary texture of plants, consists of cells which form the basis of all their organs; these cells, as well as the spaces between them, contain fluids of different kinds adapted to fulfil different purposes in the vegetable economy. Prior to the researches of modern chemistry it was supposed that pure water alone, was sufficient to support vegetation, and many experiments were tried, which resulted in favour of this opinion; it was not taken into the account, however, that water contains a portion of atmospheric air, and that the component parts of the atmosphere in its gaseous state, as well as in a state of combination with water, were essential to the growth and increase of vegetable matter.

It is not water alone, nor any other agent of itself, that is capable of fulfilling this important office. Heat, water, light, and air, are all necessary to vegetable growth. Heat is the cause of fluidity, without which the sap cannot circulate. Water is the medium through which nutriment is conveyed to the plant; the air affords the principle of vitality, while the light of the sun, by its attractive force is continually inviting the leaves of plants to spread themselves to its influence, in order to facilitate their function of exhalation. The extremities of the roots serve the purpose of absorbing nourishment from the soil, at which points, are placed little spongioles, admirably qualified for the task: and as the roots are constantly spreading in all directions, they are always in contact with some new portion of soil which contains the appropriate food. It is believed by some writers upon the subject, that there exists a perfect uniformity in the direction of the roots with the branches, so that a great portion of the rain which falls from the leaves of plants drops upon the earth at a distance from the stem, corresponding with the different extremities of the roots, and that the spongioles receive a greater amount of support than they would by a less careful arrangement. As these little mouths are incapable of imbibing thick fluids, nature has supplied a solvent which is the menstruum of all the positive food of plants. This, as we know, is rain. It receives in its passage through the soil various ingredients, which it holds in solution, and in this state is taken up by the roots, traverses the stem and branches of the plant without any perceptible change in its quality, till it reaches the leaves, and thus comes in contact with the atmosphere, where it is subjected to the process of exhalation. By this process it parts with about two-thirds of its water, and leaves the remainder more concentrated, and more divisible into the variety of nutriment adapted to the different portions of the plant. Before the leaves are formed, the sap does not come so completely into contact with the external air. It is not necessary that it should. Its office being the sustenance of an incomplete organism, it has been called the *nursling sap*. By this process of exhalation, the oxygen contained in the water which is separated, is thrown into the atmosphere in the form of gas, and its carbon retained, which being one of the principal ingredients of vegetable structures is returned to the vegetable system for its support. It is in this function, as has been stated, that light exercises its peculiar power over vegetation; for during the night this process of respiration is partially suspended, and a portion of oxygen, the great purifier of organic existence, is admitted, to vitalize the fluids of the plant, and on the return of daylight is again dissipated, to combine with the air. From the returning sap, as it circulates through the plant, is taken up different substances and deposited in its different parts by another set of organs, which in the economy of nature's laws have been provided for the purpose, and whose particular office has been termed secretion. Wax, honey, starch, the turpentines, resins, balsams, are familiar examples of vegetable secretion. So also, are considered the bitter, aromatic, narcotic, and acrid juices, which impart to vegetables their peculiar taste and odor.

The excretion of plants consists in their freeing themselves of noxious or useless particles which they may have absorbed with their nourishment; and the fact that plants possess this power, is of great importance to the farmer, inasmuch as it explains to him the advantage of a rotation of crops; for though materials may have been thrown off by one plant as injurious to it, it does not follow that others of a different species will reject them; they may afford to another variety nourishment, exactly such as is needful for their growth. This may account for the fact which has been remarked for many years in this county, and no doubt in other peach growing districts, that a crop of fine fruit cannot be procured from an orchard immediately succeeding another, on the same ground. The excretions of the peach tree have impregnated the soil with qualities that are obnoxious to its growth, and

hence the necessity of another kind of crop. A change, a regular rotation, is essential to preserve the fertility of the soil, and the consequent value of its productions.

Probably there is no subject more talked of among farmers than the succession of crops; and their experience differs, because of the variety of soils they have to cultivate, and other circumstances connected with their particular localities. You may adopt almost any system of rotation, it is true, and force your lands to the utmost extent, in order to act upon it, provided manure and money enough are expended in the effort; but it is not in such a way that the science of agriculture is to be advanced—if it were, it would be available to but few; it would be pursued as an accomplishment, and an experiment, and would not repay the cost of its management. To make it practical, useful, and profitable, a good system of rotation should of course be adopted; but it must be founded, not upon the custom of a neighbourhood, but upon the particular character of the soil, and its adaptation to the growth of certain plants. A soil in which one earth greatly predominates over another, should have an addition of the deficient material in order to restore a suitable composition. Argillaceous or clayey lands, such as are usually called sour, and wet, harden with the heat of the sun, the dew evaporates from their surface, instead of penetrating below it, and it is incapable of profitable tillage, without appropriate treatment. Apply lime, the mortar of old buildings, or other calcareous substances to such lands, and they will absorb the moisture of the soil, and it will become more friable by a chemical process, which the study of agricultural chemistry will reveal. The manures from the stable or yard, mingled with it in a *state of fermentation*, will impregnate the particles of earth with the gases that escape from it, and render the soil warmer and more nourishing to vegetation. Take, however, a different kind of land—so light and extremely porous, owing to a superabundance of calcareous earth, that it will readily absorb every particle of moisture, and it will require precisely an opposite course of culture. Clay itself, mud from the banks of rivers, will render it more cohesive, and it is evident that to increase this property, the nutritive manures should not, as in the other instance, be applied in a state of fermentation, else they would heat the soil too much, and thwart the object of producing more stability in its character. These observations, no doubt, accord with the experience of every practical farmer; and they are made in order to remind us of the importance of adapting our crops to the varieties of soil, or of altering the character of the land by appropriate manures to suit the habits of plants we may wish to cultivate: and in addition to enhancing the value of our farms, and reaping larger harvests, we have in such an engagement the satisfaction of improving the mind; which is a duty too much neglected by the agricultural community. There may be those present, who during the hasty consideration which we have given to the general structure of plants and their physiological action in the process of growth, have asked themselves the question—of what use are such disquisitions to the practical farmer? is it not enough for us, that by experience we have learned the kind of crops that are best adapted to our lands, and the best time to sow and to reap! We have educated our sons in the field, and our daughters in the dairy; we work, rest, and are satisfied:—but I trust the day is not far off when such notions will be among the things of the past, and that the members of this and similar societies will prove by their works, that the pursuit of scientific agriculture is not only more elevating to the man, but more productive to his purse, and more honourable to his race and his country, than the unphilosophical method which obtains too generally among us.

Would you make blacksmiths or wheelwrights of your sons, and not instruct them in the laws of mechanics? Would you have them enter upon the practice of medicine or law, without being first acquainted with the human organism, or the government of your country or state? Would you send them upon the wide ocean, to guide a vessel from port to port, without first teaching them geography and the art of navigation? Would you have them embark upon the uncertain sea of mercantile speculation, without acquainting them with the rules of commerce and the laws of trade? And can you train them up as intelligent farmers, without instructing them in the laws of organic life and in the nature of the soils they cultivate? Our country abounds with the means of learning—the doors of the common school are not closed against the lowest and poorest citizen. The children of the mechanic, both male and female, are instructed, not only in what have been formerly considered the elementary branches of education, but in mathematics, the geography and history of the globe, geology, physiology, natural philosophy, chemistry, and some of the modern languages. There is growing up around us a race of refined intelligence, and it is to be hoped of more substantial morality than has hitherto been known in our history:

but where are the sons and daughters of our farmers! Will they be content to bring up the rear in the march of improvement?

Our colleges too are filled with young men obtaining all the acquirements that are supposed to be necessary for the popular professions—doctors, lawyers, and theologians, are increasing almost without number in all parts of our country. And a passion for professional and mercantile pursuits has found its way into the quiet home of the husbandman; and his sons, by the time they enter their "teens," are ready to go forth in pursuit of knowledge, honour, and wealth, which they conceive can not be obtained in the more unobtrusive walks of agricultural life. And why is it so? Why should the cultivation of the soil be considered a menial employment?—Because the machinery of the human mind has not been sufficiently exercised in the operations of the farmer—because agriculture has been followed as a mere manual art, which has fed and clothed the body, but which has not aimed to satisfy the mind. In short, it has not been pursued as a science. It is not a matter of surprise that so many should engage in what are called the learned professions, when we consider the constitution of the human intellect, its attributes, and its aspirations, and that it is constantly pressing forward in the voyage of dicovery; but if we elevate the standard of that profession which is the basis of all others, we offer inducements to the aspirant after knowledge to enter the field, and become acquainted with the sublime truths which are now so little appreciated and understood. For certainly agriculture is the foundation of our social, political, and commercial existence. Every land is enriched by its treasures—every sail that flaps upon the ocean, wafts its products—every anvil sounds praises to its mother earth; and as agriculture is the first among the sciences, in alphabetical order, so is it first in importance to the community of mankind: and yet it is left to find its own auxiliaries, and to seek its own security—and its security consists in great measure in the formation and efficient discipline of agricultural associations—in the study of natural science, which brings man into a closer communion with Supreme Intelligence, elevates his mind to purer thoughts, revives and strengthens the virtues of his heart; and thus increases the safety of society and the stability of government.

In carrying on this work of elevating the character of the labouring class, by calling out their dormant powers of mind, we must encounter difficulty; and the most formidable obstacles in the way, are a blind and obstinate adherence to old practices, on the one hand, and an equally sightless and senseless attachment to mischievous novelties on the other. With the one class, every thing that is written on the subject is received with doubt and prejudice, and whatever treats of agricultural improvement on scientific principles, is set down to the credit of theory and book learning; and none are supposed to possess a knowledge of husbandry but those who hold the handles of the plough. These forget that the hands of man were made as well to direct a pen as to dig the earth; and the mind, to think as well of the connexion between causes and their results, as of buying, selling, and getting gain. With the other class, fanciful speculations are allowed too often to throw the mind from its proper balance, and to impair its judgment; yet even these are useful, as nearly all the arts and sciences are indebted for some of their most important principles and valuable discoveries, to the experiments of the ingenious and visionary. The most effectual way of guarding against the reception of mere speculative opinions, is to study the laws of vegetable life, the chemical constituents of plants, and their relation with the chemical properties of the soils upon which they grow. The most certain auxiliary that agriculture has within its reach to secure its own progress and prosperity, is the proper training of the rising generation. Let every farmer who has a son, teach him to admire nature, and inspire him with a love for the study of her works. Show him that the formation of our globe, with all its marvellous varieties, with every thing that moves and grows upon its surface, and the deep rocks and eternal fires that lie sheltered in its bosom, are evidences of the most sublime and profound science. Teach him that the earth, which he divides with his plough, is not a mere accumulation of inert matter, but that it possesses properties which it is the duty of all who cultivate it to study—that the sun sheds not its rays merely to give light and warmth to man, but to invite the plants of the soil to burst through its crust, and beautify the footstool of Deity. Trained under such influences, think you that your young men would be so desirous to exchange the substantial realities of husbandry for the uncertain chances of commerce! or for the doubts and anxieties of professional life?

Educate them as you ought, and as they deserve, and when they mingle in society they will not feel themselves deficient in intelligence, and shrink from association with good and wise men—they will stand where they ought to stand, among the first

in knowledge and virtue. None others possess the advantages for the formation of character which they do. With the rich treasures of nature spread before them, and an immortal intelligence dwelling within them, they cannot but improve, if their time and talents are properly directed.

Agriculture was chosen by the inspired lawgiver of Scripture history, as the best employment to secure the virtue and happiness of the oppressed people whom he led from Egypt. The land of Judah was promised to the seed of Abraham to be their inheritance. "A land of brooks of water, of fountains and depths that spring out of valleys and hills—a land of wheat and barley, and vines and fig-trees, and pomegranites; a land of oil, olive, and honey." Having established them as an agricultural people, under the system of legislation that was adopted, their first and highest obligation was to the Author of all their gifts. To teach them cheerfulness and contentment, they were to *rejoice* in the seed time, and *give thanks* for the harvest: to preserve inviolate their laws, they were taught to govern themselves by love—to make them hospitable, it was enjoined that they should entertain the stranger within their gates, and exercise benevolence to the widow and the fatherless—and they were commanded not to "muzzle the ox when he treadeth out the corn," as a lesson of kindness to the brute creation. Let us then be stimulated by the virtues and example of the Hebrew Shepherd, who while he fed the flocks of Jethro, became learned in that wisdom which enabled him afterward to be the leader and deliverer of the children of bondage; and among the earliest lessons which we impart to those who are rising up around us, let a love for agricultural life be prominent, because it is the best nursery of the virtues of the human heart, the best protection against the snares and corruptions that infest the world, and the best safeguard to society and to government. It is true that the farmer has his losses and his difficulties; his crops will fail, and his harvests be consumed; but while the merchant may lose his fortune in a moment, by fire, or tempest, and the professional man witness the ruin of all his hopes; the posessor of the soil not only has an inheritance as enduring as time, but he has the promise, that "while the world endureth, summer and winter, seed time and harvest shall not cease."

Culture of Cabbage.

The cabbage crop is a very important one in the vicinity of cities, and immense quantities are raised there; but we doubt whether as much attention is paid to the culture of this vegetable on the farm as there should be, considering its importance as food for both man and beast. It is true that in consequence of the severity of the weather of the Northern States—cabbage being a very watery vegetable—it is not as profitable to feed to stock as in the milder winter climate of Great Britain; and in addition to this, it is more dlfficult to keep with us, and more difficult to store. Nevertheless, for food for cattle, as the frost cuts off the grass in the autumn, and before the severity of the winter sets in, few vegetables excel it. Then such an immense quantity can be raised per acre, where the ground is favourable for the crop, and it is so easily cultivated, it is quite an inducement for those who have but a small quantity of land to devote a few acres to it.

There are various methods of cultivating the cabbage; for the field, with the larger variety, however, we prefer planting them in hills two and a half to three feet apart each way, it is so much easier using the cultivator among the plants, and thus saves the tedious process of hand-hoeing. It is a general rule to sow the seed in beds, and then transplant. A recent and much superior practice is, to sow from three to five seeds in the places where you wish one plant to grow. In this case the largest and most thrifty plant only is left standing. After it gets three to four weeks old, the other plants are pinched off or broken down. Grown in this way, the heads are said to be much larger and finer than when the young cabbages are transplanted, as it is contended that however carefully the process may be performed, the plant receives a check in its incipient state which it never entirely recovers. There is reason and philosophy in this, and we should be glad if those engaged in the culture of cabbages would make experiments the present season between different rows side by side, sowing the seed as above, and in the usual method, and then transplant.—*American Agriculturist.*

THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

Philadelphia, Sixth Month, 1846.

It is a luxury for those who are hemmed in with brick and mortar, here in our broad city, occasionally to step forth and breathe the freshness of the woods

and the fields, when clothed, as they have been for a month past, with such exuberance of growth, and fulness of promise. The vicinity of Philadelphia, possesses much to tempt the drive or the walk. There is good farming—beauty of situation—correct taste, and abundant means, whereby all may be improved to the greatest advantage. It would seem as if wealth could hardly be rationally enjoyed any where but in the country. If a man is extravagant in his table, it is but the gratification of one of his lowest propensities; if in his furniture, or his dwelling, it is in things which not only perish with the using, but which soon cease, when their novelty has worn off, to yield any great amount of enjoyment. But let the man of wealth, and liberal views, and cultivated taste, plant himself in the country, under the broad and open sky, and in the midst of his fields and his gardens and his trees, which his own industry and good judgment have made just what they should be, and let him withal be public spirited and enterprising, acting upon the principle that *we do not live for ourselves only*, and we must admit there is open to him a source of enjoyment, of the most healthy and delightful character, for the non-improvement of which, himself only can be to blame, and for the neglect of which he must assume a heavy responsibility.

These reflections have been induced on the present occasion, by a ride the Editor had the pleasure of taking on the 21st ult. to Germantown and its vicinity. Nothing need be said of the season of the year—all of us feel, in common with the vegetable world, a renewal of life, and a fresh breaking forth into its enjoyments. The neighborhood too is well known, and it is not in our plan to describe any part of it.

The day was spent with James Gowen, at Mount Airy, whose land lies mostly on the east side of the Germantown road, some eight miles from the city. The readers of the Cabinet, by means of his occasional communications, are well acquainted with his good farming, and its consequent results—large crops. His farm lies beautifully, and his fields of grass were splendid. His hedges too, of the *Maclura* thorn, or Osage Orange, look thrifty, and promise to do well. His spring wheat, and lucerne, and oats, and corn sown broadcast for soiling, showed that they had been put in the ground by the hand of a master, who intended they should produce well, or the failure should not lie at his door. The cattle have been so repeatedly exhibited at our agricultural shows, that the readers of the Cabinet know more of them than the Editor can tell them. They are truly a splendid lot of Durhams, and though some eighteen or twenty have been lately sold, to lessen the labors of the dairy, the remainder—about thirty,—make a fine display in the pasture. We remarked the milk dripping from the udder of *Dairy Maid* as she stood leisurely chewing her cud. The yard and shrubbery around the house, are just what they should be, showing very plainly the delicate and guiding hand of a mistress, as well as the stronger one of a master. When you get among the out-buildings—the barns and sheds, you might naturally enough conclude you had stumbled into the village. We liked their arrangements, and the neatness of every thing connected with them. There was a place for every thing, and every thing was in its place. The thorough measures adopted for the saving of every thing that might be turned into manure, were very obvious. We could find no little ditch to carry from the cow yard its juices into a neighbouring ravine, but on the contrary, means were adopted to save and to absorb every liquid, of the stables, and to carry into a general reservoir the slops, soap suds, &c. of the kitchen—all was saved. Our friend at Mount Airy does not act upon the idea that he can afford to waste his manures at home, and come to Philadelphia to replace them by purchase. In the different sections of stabling was the keg of plaster, and every day some was strewn on the floor to absorb the ammonia, which from its volatile nature would otherwise be wasted. The heap of poudrette, that was of course under shelter ready to be used on corn that was then being planted, was carefully covered an inch or two with plaster of paris, that every particle of its virtue might be retained.

The fine property formerly occupied as Mount Airy College, and owned by the late W. G. Rogers, has been purchased by J. Gowen. It lies immediately adjoining the homestead, and will be a splendid addition to it. The buildings and grounds, and healthiness of the neighbourhood, would remarkably well adapt it for an agricultural school, whenever it may be advisable to put such an establishment into operation.

Died at his residence in this city on the 14th ult. Dr. James Mease, in the 75th year of his age.

Strongly attached from early life to agricultural pursuits, and his views being practical, he was an efficient promoter of their interests. For several years past, he filled the chair, with great ability, as President of the Philadelphia Society for Promoting Agriculture. We shall greatly miss at our office, the friendly and social calls, of this, our venerable fellow citizen.

It is stated that 100 bushels of strawberries were sold in Cincinnati on the 26th ult. Cany any one give an estimate of the quantity brought here in a day in the height of their season?

The quantity of rain which fell in the 5th month, 1846, was nearly three inches and a half..3.44 inches.

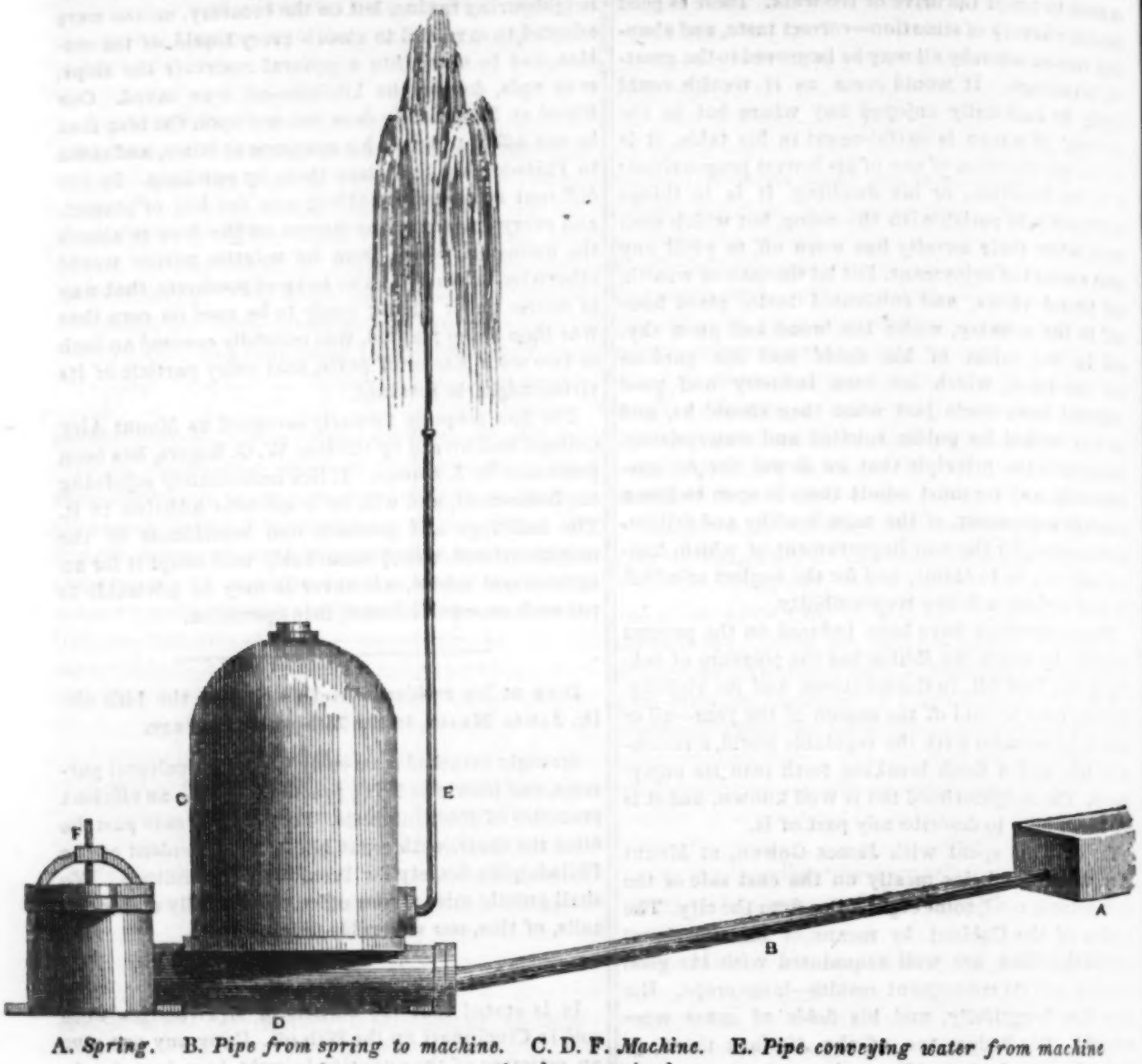
Penn. Hospital, 6th mo. 1st.

Many apprehensions are entertained of the ravages of the wheat fly. From our *exchanges*, we learn that very considerable injury must be sustained in various sections; while in others, it does not seem to have made its appearance. The wheat harvest commenced a week ago in North Carolina, and the southern part of Virginia, and promises a good yield.

A list of Premiums, &c. of our Agricultural Society shall appear in the next number of the Cabinet.

Our Jersey friends supplied us with new potatoes and string beans on the 9th inst.

MONTGOLFIER'S
HYDRAULIC RAM.



A. *Spring.* B. *Pipe from spring to machine.* C. D. F. *Machine.* E. *Pipe conveying water from machine to place required.*

For supplying Farm houses, Factories, Villages, &c., &c. with Running Water.

This is the most simple and effective machine, for forcing water ever invented; and may be used where a fall of two to ten feet can be procured to force a portion of any Spring or Brook, to any required elevation. It combines all the advantages of *cheapness, durability, simplicity and compactness.* Its cost is but about one half that of an ordinary or Force pump. Nothing can be more simple, as may be seen by inspecting the plate. There are but few parts subject to wear, and those easily replaced. Its durability is only measured by that of the material of which it is composed, viz. iron. One calculated to throw a half-inch stream to an elevation of one hundred feet, will occupy but little more than one cubic foot of space. The repairs will not amount to 25 cts. a year, and may be done by any person. They are so constructed, that any person may put them up.

☞ Each Machine *warranted* in every respect. The necessary pipe may be procured from the subscriber at manufacturers' prices—manufactured and for sale by

HENRY P. M. BIRKINBINE, *Engineer & Machinist,*

Central Block, Broad Street, between Race and Cherry, second floor, Philadelphia;

Where one of the above machines may be seen in operation.

Since the subject has been repeatedly mentioned in the Cabinet, many enquiries have been made respecting the Ram for raising water. H. P. M. Birkinbine, of this city, it will be seen, advertises above. The Editor called at his shop the other day, and was exceedingly gratified with the working of the machine. In many situations, it will be of great consequence to have this available resource for a supply of water.—Ed.

Thermometers for Farmers in Churning.

The fact being now established after various experiments, that to make butter quickly and good, depends on a certain temperature, (62° Fahrenheit,) in churning, the subscriber is prepared to furnish Thermometers at a low cost that may be relied on for their accuracy. Printed directions furnished to purchasers.

JOSEPH FISHER, 58 Chesnut St., Phila.—1t.

THE FRUIT CULTURIST, *adapted to the Climate of the Northern States; containing directions for raising young trees in the nursery, and for the management of the Orchard and Fruit Garden.* By JOHN J. THOMAS. Price 50 cents. This is a neat little volume, published by Mark H. Newman, New York, and has been placed on our table by Lindsay and Blakiston of this city, and is for sale by them, as well as at this office. It is a valuable work, prepared by an experienced cultivator of Fruit Trees, and will amply repay every farmer, who will look into it, and use the information to be obtained from it.

☞ SHORT ADVERTISEMENTS,

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

Agricultural Implement & Seed Warehouse,

No. 194½ *Market Street, Philadelphia.*

For sale as above. Cultivators from $3 50 to $5 50 each; Cultivator Ploughs for working among corn, potatoes, roots of every kind, digging potatoes, &c., &c.; Horse Rakes; Centre-Draught Ploughs for 1, 2, 3 or 4 horses; Cutting Boxes in great variety; Corn Shellers; Grain Fans; Grain Cradles of the best make; Scythes, Snaths, Scythe stones, Rifles, Grass Hooks; improved Barrel Churns, Cheese presses,&c., &c. Garden and Flower Seeds of all kinds, for, sale at wholesale and retail, by D. O. PROUTY.

March 15—tf.

Agency for the Purchase & Sale of

IMPROVED BREEDS OF CATTLE & SHEEP.

The subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay. AARON CLEMENT.

Jan. 15th, 1846.

COATES' SEED STORE,

OF MORE THAN FORTY YEARS STANDING,

Where may constantly be had

Clover, Timothy, Orchard, Herd,

AND OTHER

GRASS SEEDS,

TOGETHER WITH A COMPLETE ASSORTMENT OF

GARDEN SEEDS,

Of the finest Quality and best Varieties,

JOS. P. H. COATES.

No. 49, *Market st., Philada.*

PHILADELPHIA

AGRICULTURAL WAREHOUSE,

No. 291 *Market Street, North side, between Seventh and Eighth Streets, Philadelphia.*

Thomas Furber has just received from Worcester, Massachusetts, an assortment of Ruggles, Nourse and Mason's improved Eagle, Subsoil and other Ploughs, which have been so much approved by the principal Agricultural Societies in New England the several last years; also Bennett's Cultivators and Stevens' Self-Feeding Hay and Straw Cutter, a late and very valuable improvement in that kind of implement; Grain Cradles, &c.; an assortment of Ruggles, Nourse and Mason's Self-Sharpening Ploughs of the form and model of those above named, are daily expected. T. F. has and will constantly keep a large assortment of Farming Implements, as Fan Mills, Straw and Hay Cutters, Corn Shellers, Grain Cradles, Scythes, &c., together with Garden Tools of all kinds.

May 15th, 1846. 1 yr.

NEW

Horticultural and Agricultural Ware-house,

84 *Chesnut Street below Third, South side.*

The subscriber has for the better accommodation of his customers, opened the above ware-house, with a large stock of Garden and Field Seeds, crop of 1845. Implements and Books on Gardening and Farming; he calls the particular attention of farmers to his pure stock of Sweede Turnips, Field Carrots, Beets and Parsnips, Pruning Shears, Saws and Knives.

March 14th, 1846.—1y. R. BUIST.

SEED STORE,

No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red Clover, and other grass seeds; fresh Perennial Rye-grass, and Lucerne seed. Field seeds, consisting of choice Spring Wheat, Barley, Potatoe Oats, Northern and other seed-corn. Aso, in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

M. S. POWELL.

Philad., Feb., 1846. tf.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	$3 50
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
DANA'S MUCK MANUAL;	50
Complete sets of the FARMERS' CABINET, half-bound, 9 vols.	7 50
DOWNING'S Landscape Gardening,	3 50
Downing's Fruits and Fruit Trees of America,	1 50
SKINNER'S Every Man his own Farrier,	50
AMERICAN Poulterer's Companion,	1 25
BOUSSINGAULT'S RURAL ECONOMY,	1 50
FARMERS' & EMIGRANTS' HAND-BOOK,	1 00
MORRELL'S AMERICAN SHEPHERD,	1 00
STABLE ECONOMY,	1 00
BEVAN on the HONEY BEE,	31¼
BUISTS' ROSE MANUAL,	75
THOMAS' FRUIT CULTURIST,	50
SKINNER'S CATTLE & SHEEP DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
HOARE ON THE VINE,	62½
HANNAM'S Economy of Waste Manures,	25
LIEBIG'S AGRICULTURAL CHEMISTRY,	25
" ANIMAL CHEMISTRY,	25
" FAMILIAR LETTERS,	12½

As well as his larger works on Chemistry and Agriculture.

Subscriptions received for Colman's Agricultural Tour—or single numbers sold.

☞ We are prepared to bind books to order.

GUANO.

Twenty-five tons first quality Ichaboe Guano, in bags or barrels, for sale in lots to suit purchasers, by

S. & J. J. ALLEN & CO.,
No. 7 South Wharves, 2nd Oil Store below Market street, Philadelphia.

October 15th, 1845. tf.

Poudrette.

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the Farmers' Cabinet, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, for seven barrels or more, $1 75 per barrel, containing four bushels each. Any number of barrels less than seven, $2 each, or thirty-five cents a bushel. Orders from a distance, enclosing the cash, with cost of porterage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. The results on corn and wheat have been generally very satisfactory. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it.

JOSIAH TATUM.

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THE FARMERS' CABINET,

IS PUBLISHED MONTHLY BY

JOSIAH TATUM No. 50 NORTH FOURTH STREET, PHILADELPHIA.

It is issued on the fifteenth of every month, in numbers of 32 octavo pages each. The subjects will be illustrated by engravings, when they can be appropriately introduced.

Terms.—One dollar per annum, or five dollars for seven copies—*payable in advance.*

All subscriptions must commence at the *beginning* of a volume. Having lately struck off a new edition of one or two of the former numbers, which had become exhausted, we are now able to supply, to a limited extent, any of the back volumes. They may be had at one dollar each, in numbers, or one dollar twenty-five cents half-bound and lettered.

For six dollars paid in advance, a *complete set* of the work will be furnished in numbers, including the tenth volume. The whole can thus readily be forwarded by mail. For twenty-five cents additional, per volume, the work may be obtained neatly *half-bound and lettered.* Copies returned to the office of publication, will also be bound upon the same terms.

By the decision of the Post Master General, the "Cabinet," is subject only to newspaper postage. To any Post office within thirty miles of Philadelphia, they will go free of charge.

Joseph Rakestraw, Printer.